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## Notice of Project Change

*Green Line Extension Project (GLX)*

EEA # 13886

REF  
388.42  
MA



# GREEN LINE EXTENSION PROJECT

**GLX**  
**Green Line  
Extension**

**Submitted to:**

*Massachusetts Environmental Policy Act (MEPA) Unit by the  
Massachusetts Department of Transportation (MassDOT) and  
Massachusetts Bay Transportation Authority (MBTA)*

*January 2017*







Charles D. Baker, Governor  
Karyn E. Polito, Lieutenant Governor  
Stephanie Pollack, MassDOT Secretary & CEO  
Brian Shortsleeve, Chief Administrator and Acting General Manager



February 1, 2017

**RE: Green Line Extension Project  
EEA # 13886**

**Dear Interested Party:**

On January 31, 2017, the MBTA filed a Notice of Project Change (NPC) for the Green Line Extension Project with the Executive Office of Energy and Environment. A copy of the document can be found on the project website ([www.greenlineextension.org](http://www.greenlineextension.org)).

As you know, the Massachusetts Bay Transportation Authority has been working to advance the Green Line Extension (GLX) Project, which will bring much-needed light rail service to the municipalities immediately northwest of downtown Boston. The project was subject to MEPA review, with a Certificate being issued by the EEA on June 23, 2010, determining that the project properly and adequately complied with MEPA. Construction of the project was phased, with construction starting in 2013.

In late 2015, the MBTA reviewed the project in depth and concluded that the GLX was projecting to be significantly over budget, and could reach \$3 billion in total project costs if current trends continued. The GLX was, therefore, suspended by the MBTA Fiscal and Management Control Board and the Board of the Massachusetts Department of Transportation until costs could be brought back under control. The Boards created a multidisciplinary management team and tasked it with developing a redesign of the project to reduce anticipated costs while maintaining its core functionality and benefits, as well as the environmental mitigation commitments developed through the state and federal environmental review processes.

The new design of the project continues to maintain the core functionality of the project. The project remains in the same corridor and continues to have seven stations at the same locations as those reviewed in the EIR. These stations, however, are considerably smaller and scaled back in size and amenities. The service levels (*e.g.*, frequency, speed, hours of operations, *etc.*) remain the same. As a result, ridership and air quality benefits remain unchanged from those reviewed in the EIR.

The project also includes a Vehicle Maintenance Facility in its same proposed location, but while that facility is reduced substantially in size, it maintains its core functionality for light maintenance and storage for the additional light rail vehicles required for the extension of Green Line service.

In addition, all of the environmental mitigation commitments made in the Draft Section 61 Findings continue in place. The MBTA is not proposing any new or reduced mitigation compared to that which was codified in the Draft Section 61 document.

The MBTA has prepared the attached Notice of Project Change for your review. The NPC presents all of the changes made to the project since it was reviewed by MEPA. The MBTA strongly believes that none of these changes result in any new or different environmental impacts compared to those that were reviewed under the prior EIR. The MBTA also believes that all of the environmental

benefits associated with the project as presented in the EIR remain unchanged. Lastly, all of the mitigation agreed to previously remains intact and a commitment of the MBTA.

In light of that, we believe that no additional MEPA review is warranted and submitted this Notice of Project Change in the hopes of receiving a determination from MEPA to that effect.

EEA will now accept public comments on this document. Comments should be addressed to:

Secretary of Energy and Environmental Affairs  
Executive Office of Energy and Environmental Affairs (EEA)  
Attn: MEPA Office  
Holly Johnson, EEA No. 13886  
100 Cambridge Street, Suite 900  
Boston MA 02114  
[holly.s.johnson@state.ma.us](mailto:holly.s.johnson@state.ma.us)

*Comments must be received by EEA no later than 5 PM on Tuesday, February 28, 2017.*

If you have any questions, or if you would like to receive a hard copy of the Notice of Project Change document, please contact the Green Line Extension project team at [info@glxinfo.org](mailto:info@glxinfo.org).



For Office Use Only  
Executive Office of Environmental Affairs

MEPA Analyst:

Phone: 617-626-

## Notice of Project Change

The information requested on this form must be completed to begin MEPA Review of a NPC in accordance with the provisions of the Massachusetts Environmental Policy Act and its implementing regulations (see 301 CMR 11.10(1)).

EEA # 13886		
Project Name: GREEN LINE EXTENSION		
Street Address:		
Municipality: CAMBRIDGE, SOMERVILLE, MEDFORD	Watershed: BOSTON HARBOR	
Universal Transverse Mercator Coordinates:	Latitude: 42.317 (Lechmere), 42.378 (Union Square), 42.412 (Medford) terminus Longitude: 71.077 (Lechmere), 71.095 (Union Square), 71.121 (Medford) terminus	
Estimated commencement date: 2013	Estimated completion date: 2021	
Project Type: Transportation	Status of project design: 25 %complete	
Proponent: MASSACHUSETTS DEPARTMENT OF TRANSPORTATION/MASSACHUSETTS BAY TRANSPORTATION AUTHORITY		
Street Address: 10 PARK PLAZA		
Municipality: BOSTON	State: MA	Zip Code: 02116
Name of Contact Person: Lois Baxter		
Firm/Agency: MBTA	Street Address: 10 PARK PLAZA, RM 6720	
Municipality: BOSTON	State: MA	Zip Code: 02116
Phone: 617-222-3124	Fax:	E-mail: lbaxter@mbta.com

With this Notice of Project Change, are you requesting:

- |  |                              |  |
|--|------------------------------|--|
| a Single EIR? (see 301 CMR 11.06(8))           | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Special Review Procedure? (see 301CMR 11.09) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Waiver of mandatory EIR? (see 301 CMR 11.11) | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| a Phase I Waiver? (see 301 CMR 11.11)          | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

11.03 (1) a. (1) Direct alternation of 50 or more acres of land

11.03 (6) a. (6) Construction of a new rapid transit line along a new, unused, or abandoned ROW for transportation of passengers or freight

11.03 (10) b. (1) Demolition of a historic structure listed in or located in the State Register of Historic Spaces or the Inventory or Historic and Archeological Assets of the Commonwealth.

Which State Agency Permits will the Project Require?

Massachusetts Department of Transportation access permits.

Massachusetts Water Resources Authority 8(m) permits, Sewer Connection Permit, Sewer Discharge Permit  
US EPA NPDES General Permit of Discharges from Construction Activities, Remediation General Permit for Contaminated Groundwater Discharges, and modification of existing Individual NPDES permit for discharges associated with an industrial activity.

Determination of Effect to Historic or Archeological Resources (Section 106 of the National Historic Preservation Act) and a Section 4(f) Determination by the Federal Transit Administration (completed)

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres: *The project will be funded by Federal Transit Administration and State and City Funds. The City of Somerville will contribute \$50 million and the City of Cambridge, \$25 million.*

## PROJECT INFORMATION

In 25 words or less, what is the project change? The project change involves . . .  
Redesign to reduce costs, including reduction in size of stations and vehicle maintenance facility. Project  
termini, number of stations and service plan remain the same.  
See full project change description beginning on page 3.

Date of publication of availability of the ENF in the Environmental Monitor: (Date: 10/10/06 )

Was an EIR required? ☒ Yes ☐ No; if yes,  
was a Draft EIR filed? ☒ Yes (Date: 10/15/09 ) ☐ No  
was a Final EIR filed? ☒ Yes (Date: 06/15/10 ) ☐ No  
was a Single EIR filed? ☐ Yes (Date: ) ☒ No

Have other NPCs been filed? ☐ Yes (Date(s): ) ☒ No

If this is a NPC solely for lapse of time (see 301 CMR 11.10(2)) proceed directly to  
**ATTACHMENTS & SIGNATURES.**

## **PERMITS / FINANCIAL ASSISTANCE / LAND TRANSFER**

List or describe all new or modified state permits, financial assistance, or land transfers not  
previously reviewed: **dd w/ list of State Agency Actions (e.g., Agency Project, Financial  
Assistance, Land Transfer, List of Permits)**

Are you requesting a finding that this project change is insignificant? A change in a Project is  
ordinarily insignificant if it results solely in an increase in square footage, linear footage,  
height, depth or other relevant measures of the physical dimensions of the Project of  
less than 10% over estimates previously reviewed, provided the increase does not meet  
or exceed any review thresholds. A change in a Project is also ordinarily insignificant if it  
results solely in an increase in impacts of less than 25% of the level specified in any  
review threshold, provided that cumulative impacts of the Project do not meet or exceed  
any review thresholds that were not previously met or exceeded. (see 301 CMR  
11.10(6)) ☒ Yes ☐ No; if yes, provide an explanation of this request in the Project  
Change Description below.

The project change does not extend the GLX project beyond the limits previously reviewed.  
The stations and vehicle maintenance facility are reduced in size as a cost saving measure.

## **FOR PROJECTS SUBJECT TO AN EIR**

If the project requires the submission of an EIR, are you requesting that a Scope in a previously  
issued Certificate be rescinded?

☐ Yes ☒ No; if yes, provide an explanation of this request\_\_\_\_\_.

If the project requires the submission of an EIR, are you requesting a change to a Scope in a  
previously issued Certificate?

☐ Yes ☒ No; if yes, provide an explanation of this request\_\_\_\_\_.



## SUMMARY OF PROJECT CHANGE PARAMETERS AND IMPACTS

Summary of Project Size & Environmental Impacts	Previously reviewed	Net Change	Currently Proposed
<b>LAND</b>			
Total site acreage			
Acres of land altered			
Acres of impervious area			
Square feet of bordering vegetated wetlands alteration			
Square feet of other wetland alteration			
Acres of non-water dependent use of tidelands or waterways			
<b>STRUCTURES</b>			
Gross square footage	220,643	-153,016	67,627
Number of housing units			
Maximum height (in feet)			
<b>TRANSPORTATION</b>			
Vehicle trips per day			
Parking spaces			
<b>WATER/WASTEWATER</b>			
Gallons/day (GPD) of water use			
GPD water withdrawal			
GPD wastewater generation/ treatment			
Length of water/sewer mains (in miles)			

Does the project change involve any new or modified:

1. conversion of public parkland or other Article 97 public natural resources to any purpose not in accordance with Article 97? ☐Yes ☒No

2. release of any conservation restriction, preservation restriction, agricultural preservation restriction, or watershed preservation restriction? ☐Yes ☒No

3. impacts on Rare Species? ☐Yes ☒No

4. demolition of all or part of any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?  
☐Yes ☒No

5. impact upon an Area of Critical Environmental Concern? ☐Yes ☒No

If you answered 'Yes' to any of these 5 questions, explain below:

**PROJECT CHANGE DESCRIPTION** (attach additional pages as necessary). The project change description should include:

- (a) a brief description of the project as most recently reviewed
- (b) a description of material changes to the project as previously reviewed,
- (c) if applicable, the significance of the proposed changes, with specific reference to the factors listed 301 CMR 11.10(6), and
- (d) measures that the project is taking to avoid damage to the environment or to minimize and mitigate unavoidable environmental impacts. If the change will involve modification of any previously issued Section 61 Finding, include a draft of the modified Section 61 Finding (or it will be required in a Supplemental EIR).

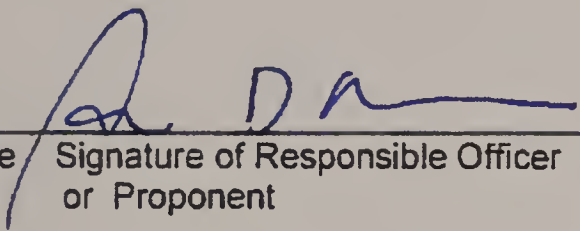
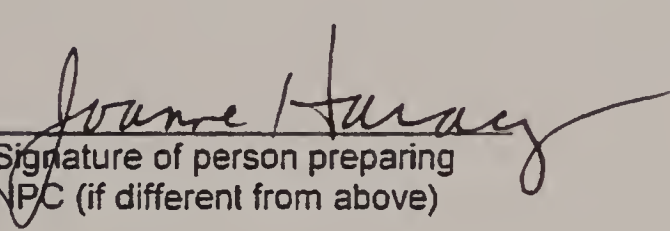
See attached Project Change Description

## ATTACHMENTS & SIGNATURES

### Attachments:

1. Project Change Description
2. Secretary's most recent Certificate on this project
3. Plan showing most recent previously-reviewed proposed build condition
4. Plan showing currently proposed build condition
5. Original U.S.G.S. map or good quality color copy (8-1/2 x 11 inches or larger) indicating the project location and boundaries
6. List of all agencies and persons to whom the proponent circulated the NPC, in accordance with 301 CMR 11.10(7)
7. Draft Section 61 Finding

### Signatures:

1-31-17  1/30/17 

Date Signature of Responsible Officer or Proponent Date Signature of person preparing NPC (if different from above)

Andrew Brennan	Joanne Haracz, AICP
Name (print or type)	Name (print or type)
MBTA	McMahon Associates
Firm/Agency	Firm/Agency
10 Park Plaza, Room 6720	45 Bromfield Street, Floor 6
Street	Street
Boston MA, 02116	Boston MA, 02108
Municipality/State/Zip	Municipality/State/Zip
(617) 222 3126	(617) 556-0020
Phone	Phone





## **1. Project Change Description**





## Project Change Description

### 1 Introduction

The Green Line Extension (GLX) is a major MBTA project that would provide new transit service to Union Square in Somerville and to College Avenue in Medford. The project includes the relocation of the existing commuter rail tracks, the construction of 4.3 miles of new Green Line tracks and systems, one relocated station (Lechmere) and six new stations (Union Square, College Avenue, Ball Square, Lowell Street, Gilman Square, and Washington Street), and a new vehicle maintenance facility. The GLX project was conceived to deliver a range of regional environmental, economic, and other benefits, including improved transit options for a dense and underserved area.

MassDOT entered into the Massachusetts Environmental Policy Act (MEPA) environmental review process for the GLX project in compliance with 301 CMR 11.00 with the submittal of an Expanded Environmental Notification Form (EENF) to the Executive Office of Environmental Affairs (EEA) on October 10, 2006. The Secretary of Environmental Affairs issued a Certificate on the EENF on December 1, 2006 requiring the preparation of a Draft Environmental Impact Report (DEIR) for the proposed project that included an analysis of project and maintenance facility alternatives.

The DEIR was submitted to EEA on October 15, 2009, and included an evaluation of alternatives leading to the selection of the GLX to Medford Hillside and Union Square via commuter rail right-of-ways as the alternative for project development. Extension of the Medford Branch to Mystic Valley Parkway/Route 16 was deferred to a future project phase due to fiscal constraints.<sup>1</sup> Alternatives for the maintenance facility site were also evaluated. The MEPA Certificate on the DEIR was issued on January 15, 2010, requiring MassDOT to prepare a Final Environmental Impact Report (FEIR), primarily to provide additional evaluation of alternative maintenance facility locations.

The FEIR was submitted to the Executive Office of Energy and Environmental Affairs on June 15, 2010 and confirmed the selection of the Option L parcel located in the Inner Belt section of Somerville as the location for the maintenance facility. The FEIR also contained draft *Section 61 Findings* and a list of mitigation commitments. The Certificate of the Secretary of Energy and Environmental Affairs on the FEIR was issued on July 30, 2010 stating that the FEIR adequately and properly complies with MEPA and its implementing regulations, and that any outstanding project issues could be addressed during state and local permitting and review.

MassDOT and the MBTA subsequently prepared an Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) in 2011. Based upon review of the environmental documentation, the Federal Transit Administration (FTA) issued a Finding of No Significant Impact (FONSI) for the project on July 9, 2012.

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<sup>1</sup> The MBTA will file an Environmental Notification Form in the spring of 2017 to begin the MEPA Environmental review of the GLX Extension to Route 16/Mystic Valley Parkway.

Construction of the project was phased, with construction starting in 2013. The first phase of construction was funded entirely by the Commonwealth of Massachusetts. The GLX project was then approved for funding through the FTA's New Starts program<sup>2</sup>, with a signed Full Funding Grant Agreement (FFGA) in January 2015, which awarded nearly \$1 billion in federal funds to the project. This grant amounted to a 50% share of the estimated project cost at the time of the FFGA.

Late in 2015, the Massachusetts Department of Transportation (MassDOT) reviewed the project in depth and concluded that the GLX was projecting to be significantly over budget, and could reach \$3 billion in total project costs if current trends continued. The GLX was therefore suspended by the MBTA Fiscal and Management Control Board and the Board of the Massachusetts Department of Transportation ("the Boards") until costs could be brought back under control. The Boards created a multidisciplinary Interim Project Management Team (IPMT), and tasked it with developing a redesign of the project to reduce anticipated cost while maintaining its core functionality and benefits, as well as the environmental mitigation commitments developed through the state and federal environmental review processes.

During the redesign, MassDOT and the MBTA held a robust stakeholder process, which included six public meetings, two meetings with the Design Working Group, and multiple meetings with other stakeholders, such as the cities of Somerville, Medford, Cambridge, the Conservation Law Foundation, the Friends of the Community Path, and other groups.

The IPMT presented a revised design for the GLX to the Boards in May of 2016<sup>3</sup>. The redesigned GLX project includes revisions to the stations, the vehicle maintenance facility, the viaducts and bridges, power and signal systems, and the Community Path, and includes all stations on the Medford and Union Square branches. The station locations, platform size and functionality remain unchanged under the redesign program. The IPMT's new total GLX program cost estimate for the redesign is \$ 2.3 billion. This total value includes costs that have already occurred. The gap between the last official program cost of \$1.992 billion as stated in the FFGA and the current estimate of \$2.3 billion is approximately \$300 million. The Boston MPO has committed \$150 million in federal highway funding the cities of Cambridge and Somerville have announced their intention to commit a total of \$75 million (\$50 from Somerville and \$25 million from Cambridge) to the redesigned GLX project towards closing this gap. However, a funding gap of approximately \$75 million remains. The fiscal challenges which threatened the viability of the entire GLX project remain of concern. The MBTA is focused on managing project costs as the project moves forward.

The FTA presented its review of the redesigned GLX in an August 25, 2016 letter to the MBTA which found that the project as redesigned is consistent with the Full Funding Grant Agreement which will allow MassDOT and the MBTA to partially fund the GLX project using federal monies. They also found that the latest cost estimates are complete and well documented and that the project schedule is mechanically sound, but potentially optimistic.

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<sup>2</sup> The FTA administers the Section 5309 Capital Investment Grant Program (CIG) which provides capital funds for major transit investment projects. The GLX project met the New Starts category of eligible projects under the CIG, which includes design and construction of new fixed- guide ways or extensions of fixed-guide ways for projects with a total estimated capital cost of \$250 million or more, that are seeking \$75 million or more in Section 5309 program funds.

<sup>3</sup>May 9, 2016, *Interim Project Management Team Report: Green Line Extension Project, to the MBTA Fiscal and Management Control Board and the MassDOT Board of Directors*



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On August 8, 2016, the MBTA Fiscal & Management Control Board to authorize the MBTA to proceed with the next phase of the GLX and begin the process of procuring a new construction team using the Design-Build procurement method. A Request for Qualifications (RFQ) was issued on December 15, 2016, and the Draft Request for Proposal (RFP) is scheduled to be issued in March 2017. The current procurement schedule anticipates award notification in November 2017. Construction is scheduled from February 2018 through December of 2021.

## 2 Project as Most Recently Reviewed

The MassDOT and the MBTA jointly undertook the Green Line Extension (GLX) Project with the primary purpose to provide improved public transit service to Cambridge, Somerville and Medford. As described in the FEIR, the GLX would extend MBTA Green Line service to College Avenue in Medford and Union Square in Somerville, using a two-branch operation, both in existing commuter rail right-of-way (ROW). The 3.4 mile Medford Branch would operate from a relocated Lechmere Station to College Avenue in Medford along the Lowell Line commuter rail ROW. This branch would begin at relocated Lechmere Station and head northwest, meeting the MBTA Lowell line just south of Washington Street in Somerville. From Washington Street, the alignment would run parallel to the MBTA Lowell line to its terminus at College Avenue in Medford. The 0.9 mile Union Square Branch would operate along the MBTA Fitchburg Line commuter rail ROW from relocated Lechmere station to a terminus at Union Square in Somerville.

Seven stations would be constructed:

- Relocated Lechmere Station, Cambridge
- Brickbottom Station, Somerville (subsequently named Washington Street Station, and now, East Somerville Station)
- Gilman Square Station, Somerville
- Lowell Street Station, Somerville
- Ball Square Station, Medford
- College Avenue Station, Medford
- Union Square Station, Somerville.

The project also included:

- Relocation of existing commuter rail lines, construction of approximately four miles of new light rail track and systems, potential relocation, removal and/or elimination of freight tracks, four multi-span viaducts, a vehicle maintenance and storage facility, and reconstruction of 11 bridge structures along the project corridor;
- Completion of the planning, design and engineering for the proposed extension of the Somerville Community Path between Lowell Street and Inner Belt Road; and
- Construction and/or implementation of measures to mitigate potential project operational and construction period impacts associated with, but not limited to: noise and vibration, traffic, air quality, stormwater, hazardous materials management, historical and cultural resources, land use, and ongoing public involvement.



### **3 Changes to Project**

The evaluation of the GLX through the MEPA process took place early in the design when many of the design elements for the project, such as the stations, had yet to be finalized. The redesign of the GLX project modified many of these design elements in the final design for which the FFGA was granted (such as reducing station size) to reduce project costs, but the GLX remains the same project which completed MEPA review in 2010. The proposed redesign maintains the basic functionality of the project and provides the same benefits. As with the original project design, the revised design consists of a 4.3 mile extension of the existing Green Line light rail service to College Ave in Medford and Union Square in Somerville. It includes relocation of existing commuter/freight rail track, construction of light rail track and systems, construction or rehabilitation of viaduct structure, and implementation of new power, signals and communications equipment. The revised design includes the same stations in the same locations as originally reviewed:

- Relocated Lechmere Station, Cambridge
- Brickbottom Station, Somerville (Subsequently named Washington Street Station as the design progressed. To be re-named East Somerville Station based on recent coordination with the City of Somerville)
- Gilman Square Station, Somerville
- Lowell Street Station, Somerville (To be re-named Magoun Square Station based on recent coordination with the City of Somerville)
- Ball Square Station, Medford
- College Avenue Station, Medford
- Union Square Station, Somerville

The stations will have the same size platforms as originally proposed and will therefore be able to serve the same number of passengers as originally anticipated. The redesigned project also includes the construction of a smaller Vehicle Storage and Maintenance Facility to provide light maintenance and storage for 44 vehicles. Heavy maintenance activities will be accomplished at the existing Riverside and Reservoir maintenance facilities. The 24 light-rail vehicles required for the extension of Green Line service have already been procured.

Factors which affect potential trip generation and air quality benefits, including the number and location of stations and platform size, as well as span of service and service frequency, are the same for the redesign concept as was originally proposed<sup>4</sup>. The Green Line Extension service as redesigned will still provide 6 minute headways in the week day peak period, with service every 8 to 11 minutes in the weekday off –peak period, every 13-14 minutes on weekday evenings, and every 8 to 10 minutes on weekends. The station locations, platform size and functionality remain unchanged.

Project cost reductions were found through modification of project design elements, including:

- Redesign of the stations – transforming them from sizable, enclosed structures to open-air platforms akin to what has been in use for decades on the existing surface Green Line.

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<sup>4</sup> It should be noted that the Community Path was not a factor in determining project transit trips.

### Notice of Project Change

- A substantially reduced Green Line maintenance facility, which maintains its core functionality for light maintenance and storage for the additional light rail vehicles required for the extension of Green Line service.
- Preservation of a number of bridges along the GLX corridor and reduced reconstruction of others.
- An alternative version of the multiuse Community Path.
- An alternative version of the Lechmere viaduct structure.
- Modifications to retaining walls to reduce height and simplify construction.
- Modifications to traction power substations at Red Bridge, Gilman Square, and Ball Square.
- An alternative construction plan and schedule that would allow a construction contractor greater and more flexible access to the work area.
- A reduced construction scope, which could reduce the overall project schedule and risk profile.

Redesign of the station and vehicle maintenance facility that had been the subject of prior MEPA review are discussed in more detail below. In addition, information regarding the redesign of the Somerville Community Path is also provided, as it has been a subject of stakeholder comments during the redesign public involvement process.

#### **3.1 Stations**

The previous final design of each of the seven stations included escalators, redundant elevators, fare arrays, personnel rooms, canopies, and equipment rooms (most of which were housed within a station structure). Inclusion of these elements at each station resulted in large stations well beyond that normally found on light rail systems.

The recommended concept for downsizing the stations maintained basic functionality at each station, with a few important amenities added to each station, using the current “open air stations” on the MBTA Riverside Line as an example.

The redesigned functional stations include simple open air platforms with bus type shelters (ie., weather shelters) in lieu of canopies, fare vending, station lighting and CCTV, an emergency egress route where required, bike storage and required equipment rooms. All stations will meet ADA access requirements. For stations with large access grade separations (Gilman and Lowell) the redesign includes an elevator and access stairs. For the stations at Lechmere and College Avenue, the redesign includes redundant elevators (due to the large elevation differential between the street and the platform level).

A summary comparison of the previous design and the redesign station is provided in Figure 3.1. Figures 3.2 and 3.3 provides a comparison of the previous design and the redesign for Ball Square Station to illustrate the changes.

FIGURE 3-1: COMPARISON OF STATION DESIGN AND REDESIGN

Function	Previous Design							Redesign						
	Lechmere	Union Sq.	Washington	Gillman Sq.	Lowell St.	Ball Sq.	College Ave	Lechmere	Union Sq.	Washington	Gillman Sq.	Lowell St.	Ball Sq.	College Ave
Elevators	3	2	2	2	2	2	2	2	N	N	1	1	N	2
Escalators	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N
Stairs	Y	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y	N	Y
Ramp	N	N	N	Y	Y	N	Y	N	N	N	Y	N	N	N
Fare vending	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Fare arrays	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N
Canopies	Y	Y	Y	Y	Y	Y	Y	Weather Shelters	Weather Shelters	Weather Shelters	Weather Shelters	Weather Shelters	Weather Shelters	Weather Shelters
Platforms	4-Car	3-Car	3-Car	3-Car	3-Car	3-Car	3-Car	4-Car	3-Car	3-Car	3-Car	3-Car	3-Car	3-Car

Features of the redesign for each station, which are summarized in the chart above include:

- **Lechmere Station:** Reduced North Headhouse, with redundant elevators, platform with four weather shelters, South Headhouse includes emergency egress and stairs with The RIDE Drop Off and bike storage area retained.
- **Washington Street Station:** Open air station, platforms with three weather shelters, at grade crossing of track, bike storage area retained.
- **Gilman Square Station:** Open air station, one elevator and stair provided, platforms with three weather shelters, bike storage area retained.
- **Lowell Street Station:** Open air station, one elevator and stair provided, platform with three weather shelters, bike storage area retained.
- **Ball Square Station:** Open air station, platforms with three weather shelters, bike storage area retained, at grade crossing of track.
- **College Avenue Station:** Reduced structure (Tufts future development preserved), platforms with three weather shelters, redundant elevators, The RIDE drop off is retained on Boston Avenue, bike storage area retained.



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- **Union Square Station:** Open air station, platform with three weather shelters, the RIDE drop off retained as part of the future development, bike storage retained, no escalators or elevators. The proposed adjacent development provides the opportunity to incorporate elevators into its design to serve the station.

Blank space left intentionally.

FIGURE 3-2: BALL SQUARE STATION: PREVIOUS DESIGN

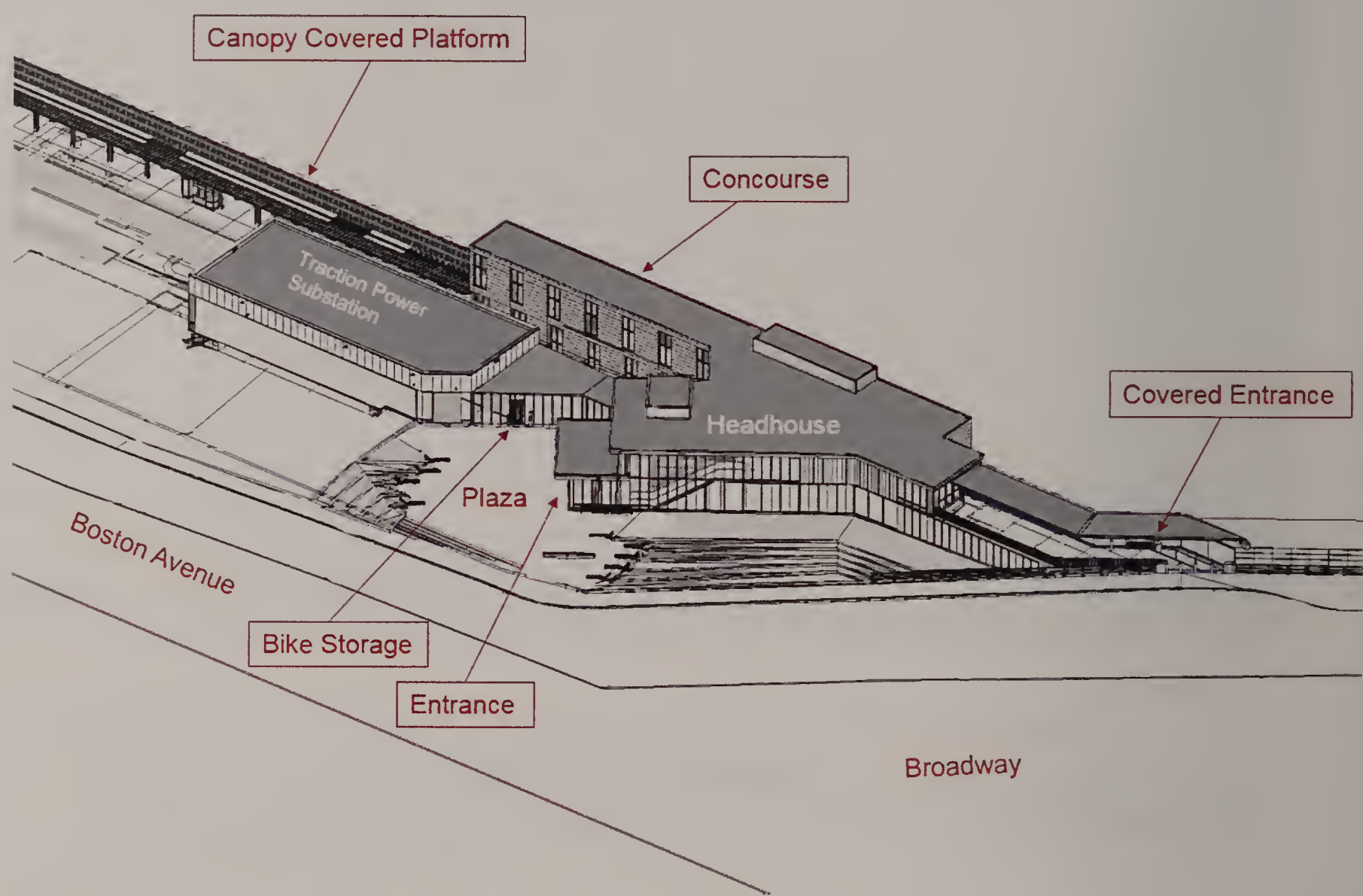
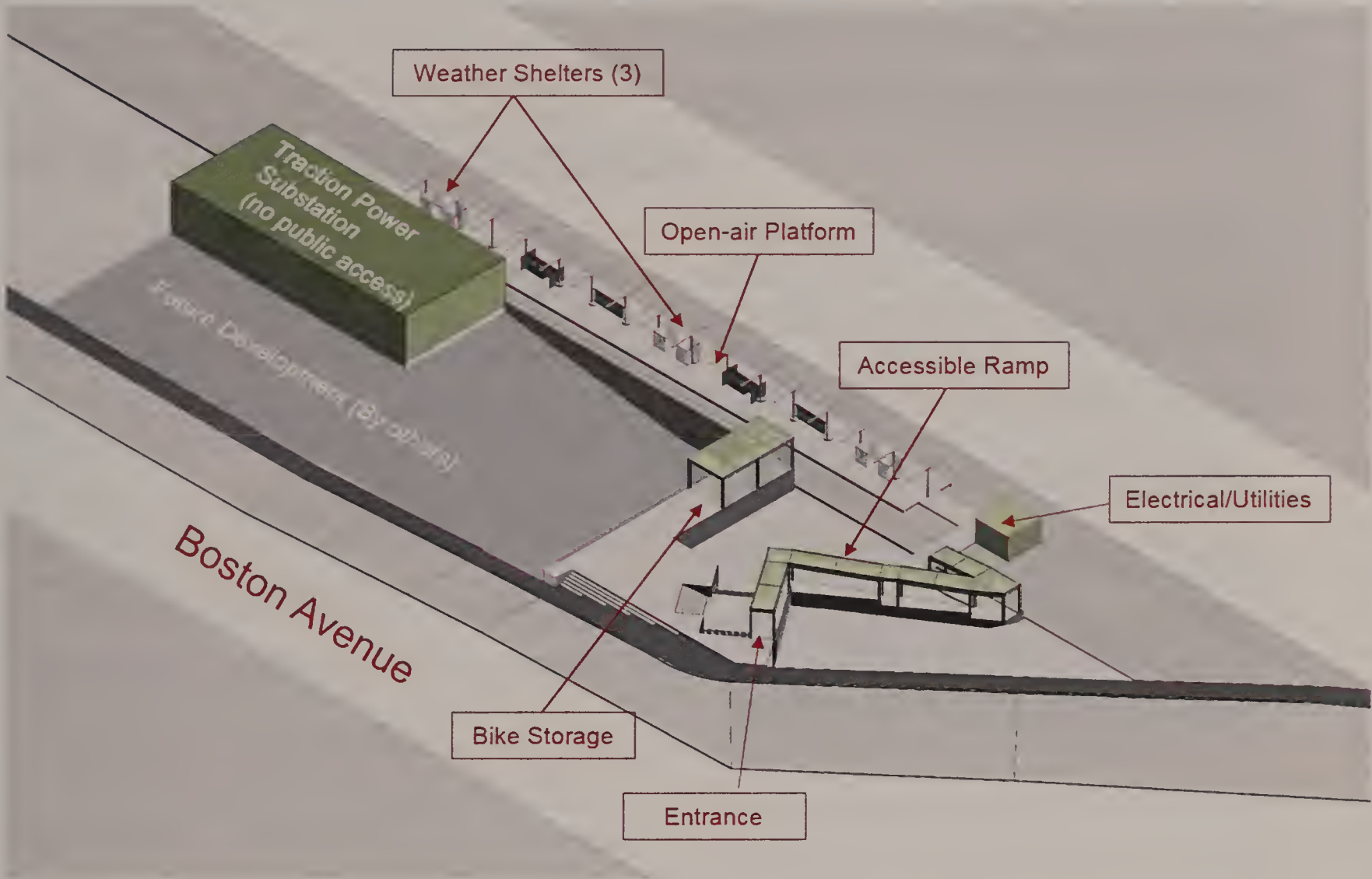


FIGURE 3-3: BALL SQUARE STATION: REDESIGN



## Notice of Project Change

The redesign of the stations results in a significant reduction in the footprint of the station structures, with an overall reduction from a total of 118,443 square feet to 11,427 feet. Table 3.1 provides a summary of the change in building area for each station.

**TABLE 3-1: COMPARISON OF STATION AREA**

Station	Previous Project	Redesign Project	Difference
Lechmere Station			
Station Area	33,029 SF	6,360 SF	-26,669 SF
Washington Street Station			
Station Area	17,830 SF	1,977 SF	-15,853 SF
Union Square Station			
Station Area	14,925 SF	250 SF	-14,675 SF
Gilman Square Station			
Station Area	13,608 SF	250 SF	-13,358 SF
Lowell Station			
Area	11,271 SF	250 SF	-11,021 SF
Ball Square Station			
Ball Square Station Area	13,800 SF	250 SF	-13,550 SF
College Avenue. Station			
Station Area	13,980 SF	1,910 SF	-12,070 SF
<b>Total</b>	<b>118,443 SF</b>	<b>11,247 SF</b>	<b>-107,196 SF</b>

**3.2 Vehicle Maintenance Facility**

The previous design included a 94,000-square-foot vehicle maintenance facility (VMF), which called for the following features:

- Outdoor storage for 88 Green Line vehicles
- Parking for 80 maintenance personnel
- Parking deck for 99 cars (for operators)
- A double-ended maintenance building
- Transportation Building of 8200 square feet
- One service and clean bay
- One flat floor bay
- Two component change out bays
- Four service and inspection bays
- One wash bay
- Administrative and employee offices and facilities
- HVAC shop and storage
- Sand storage and automated equipment
- Truck shop
- Two five-ton and one seven-ton crane servicing three bays
- Traction Power Sub Station fed by two independent utility feeders
- Storage and shop for two Maintenance of Way Trucks.



By contrast, the redesigned maintenance facility includes a 55,000 square foot maintenance building, a capacity to store 44 vehicles outside, a modular transportation building of 1200 square feet, surface level parking, four service tracks, a seven-ton and a 10-ton crane, and two inspection bays. All other features have been deleted, although certain foundation and structural elements have been sized for potential future expansion should funding become available. The VMF remains on the same site as reviewed in the FEIR.

### 3.3 Community Path

The Somerville Community Path has been the subject of extensive coordination and participation with the affected communities throughout the development of the GLX. The project as described in the FEIR included planning, design and engineering for the proposed extension of the Somerville Community Path between Lowell Street and Inner Belt Road in the vicinity of Washington Street Station. That planning, design and engineering has been completed, and the MBTA believes that this commitment in the FEIR has been met.

Upon completion of the MEPA review, as well as after completion of the NEPA review with the FTA, MassDOT and the MBTA agreed to construct the path from Magoun Square Station (formerly known as Lowell Street Station) to Lechmere. When the total estimated cost of the project rose to a point where the entire GLX project was no longer affordable, the MBTA redesigned the project, assessing many different proposals that would have removed or altered many items, one of which was elements of the previously designed Community Path.

The existing Somerville Community Path intersects the GLX alignment near Lowell Street and the previous design met that path and then essentially followed the west side of the GLX alignment towards Boston. The previous Somerville Community Path was designed to follow the alignment at street level directly adjacent to the railroad cut, from Lowell Street station to Washington Street Station. Beyond Washington Street Station, the previous path design alignment included a viaduct in order to go up and over the Fitchburg Main Line tracks and the various yard tracks. This viaduct essentially followed the alignment of the GLX Lechmere Viaduct until it finally touched down to ground near Water Street in Cambridge.

This previous Somerville Community Path design has been identified as one of several potential major drivers of the forecasted project cost increase. The cost of the previous design of the path was driven by two factors:

- The retaining walls between Lowell Street and Washington Street Stations had to be significantly increased in height in order to align the path at street level adjacent to the west side of the railroad cut;
- The viaduct section near Lechmere Station, which spanned over the Green Line and Commuter Rail tracks, as well as over city streets, was also determined to be very expensive.

To reduce Community Path costs, two options were evaluated:

- ***Elimination of the Path:*** A preliminary redesign of the GLX corridor without the Community Path was conducted to ensure this would work from an engineering perspective. This included revisions to the cross sections and viaduct structures. Based on this evaluation, the MBTA was satisfied that the GLX could be built without the path, with significant cost savings over the

previous design, and that nothing in the redesign would preclude a future construction of the previous designed Community Path.

- ***Alternate Alignment:*** While elimination of the Path would result in the greatest savings, the MBTA, the affected community, and other stakeholders expressed significant concern over the potential of no path at all. Therefore, the MBTA sought to identify what a very low-cost redesigned Community Path might look like. The MBTA used the “no path” corridor redesign as the base (i.e., greatly reduced walls and no viaduct). By looking at the alignment in sections, the MBTA identified the potential to include a path along the railroad cut from the existing terminus at Lowell Street to Washington Street Stations. From there, users continuing to the Charles River parks would need to follow the existing street system.

The Alternate Alignment has been located to minimize the need for additional walls between Lowell Street and Washington Street, by (1) moving it laterally away from the railroad cut where possible, for example between Lowell Street and Central Street through an existing city park; (2) switching from the west side to the east side and back again between Central Street and School Street, and, (3) revising the grade to lower it to track level beyond School Street. This is further illustrated in the figures at end of this section.

Beyond Washington Street, the path ends and people would need to use existing streets (including McGrath Highway) to reach the Charles River parks, in lieu of the previous design’s viaduct structure. Like other design elements of the GLX that were not necessary to provide the transit service that is the purpose of the GLX project, a continuation of the Path to NorthPoint was eliminated due to cost.

The MBTA is making a substantial investment in building a major new section of the Community Path from Magoun Square Station to East Somerville Station – approximately 1.4 miles of Community Path at a cost of approximately \$20 million. Given the substantial scope reductions that were made to this project to bring it back to the point of affordability, the MBTA is glad it was able to maintain this segment as part of the proposed GLX. The MBTA fully supports and understands the community’s interest in a full off-road path. It is important to note that there were many other components of the project that were equally meritorious that the MBTA found necessary to remove, such as canopies on the station platforms. In addition, while all of the stations are fully accessible to persons with disabilities and meet all of the requirements of the Americans with Disabilities Act, the elevators and escalators have been removed from several stations; a more robust approach to accessibility was not affordable. Lastly, while the Vehicle Maintenance Facility will support the needs of the GLX service, the MBTA was forced to make reductions in its size and scope to make it affordable as part of the GLX program, despite the MBTA’s interest in having additional and more modern vehicle maintenance space for the existing Green Line operations. While we appreciate that the community is seeking a full build of the Community Path, the MBTA’s current plans are all that can be afforded. Adding this section of the Community Path, or any other major project scope elements, back into the GLX project, runs the risk of making the project unaffordable and jeopardizing the ability to continue with the GLX project.

Community members and local elected officials have asked that we ask the Design-Build (DB) bidders to propose ways to build the Community Path as part of the project while still maintaining the budget. The community believes that the DB procurement process provides this level of flexibility. The Request for Proposals (RFP) for the DB contract is currently being developed and will be released in the spring of 2017. The MBTA is committed to seeing what potential opportunities exist in the DB process that would provide

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contractors with an opportunity to improve the current design so that it comes closer to the community's expectations, while maintaining the budget. The MBTA will work to see if this type of arrangement can be inserted into the DB procurement while not jeopardizing price or schedule. Design changes or new scope that increases the ceiling price for the project are not acceptable for the MBTA. It should also be noted, however, that additional competing interests (such as canopies, elevators, etc.) exist for any potential funds made available in the DB process.

The July 2010 Certificate on the FEIR states that *"in finalizing project design plans, MassDOT should consider future path connections to NorthPoint, and ensure that the final design does not preclude these future connections."* The MBTA is confident that it has met and will continue to meet this request in the Secretary's Certificate. Nothing in the current design or planned operations of the GLX project will preclude this future connection in the vicinity of Lechmere Station. While we acknowledge that if built within the GLX design-build contract the elevated section of the Community Path might be more affordable and would be built sooner, there is nothing in the design that precludes the final section of the Community Path from being built at a later date. In addition, the RFP documents will make it clear to the Design Builder that this future potential must not be precluded.

A comparison of the original Community Path and the Alternate Community Path concept is presented in Figures 3.4 and 3.5.

**Blank space left intentionally.**



FIGURE 3-4: PREVIOUS COMMUNITY PATH DESIGN

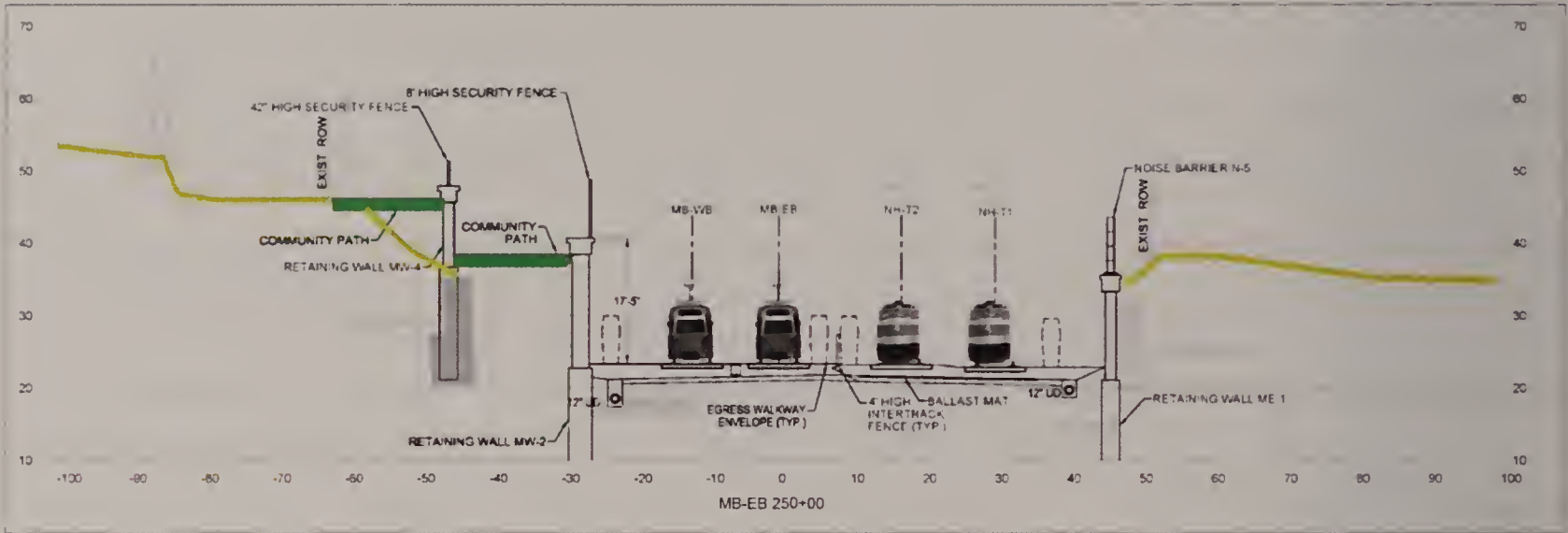
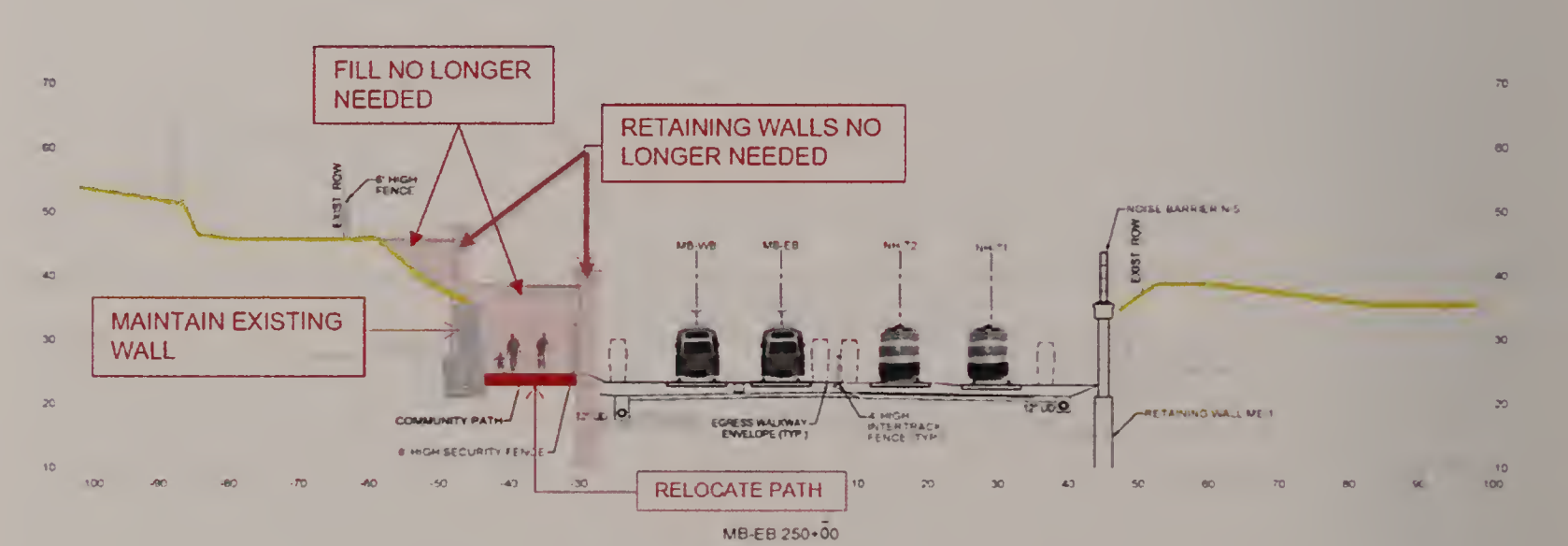


FIGURE 3-5: ALTERNATE COMMUNITY PATH DESIGN





## **4 Environmental Consequences**

In accordance with 310 CMR 11.10 (6) (Secretary's *Consideration of Environmental Consequences*"), the MBTA believes that the redesign of the GLX does not increase the environmental consequences of project and that additional environmental review and MEPA filings are not warranted based on the following factors:

### **Expansion of the Project**

The redesign of the GLX does not extend the project beyond the limits reviewed in the 2010 FEIR. College Avenue in Medford remains as the terminus of the 3.4 mile Medford Branch Green Line extension from the relocated Lechmere Station along the Lowell Line commuter rail ROW, and Union Square in Somerville remains as the terminus of the Union 0.9 mile Square Branch operating along the MBTA Fitchburg Line commuter rail ROW. Neither is there an increase in the square footage of the stations or vehicle maintenance facility associated with the project. Rather, building size is decreased as a cost saving measure. The Vehicle Maintenance Facility is reduced from 94,000 sf to 55,000 sf, the Transportation Building is reduced from 8,200 sf to 1,400 sf, and the stations collectively are reduced from 118,000 sf to 11,000 sf. As there is no expansion, the project does not meet or exceed any new MEPA review thresholds.

### **Generation of Further Impacts**

The GLX and commuter rail alignments remain the same, and the project will maintain the same operational service plan. Therefore, there is no increase in impacts associated with GLX operations, such as noise and vibration. The MBTA remains committed to implementing measures to mitigate noise and vibration impacts as described in the FEIR. To the degree that there are any impacts from stations, the impacts are lessened since the overall footprint of the station is smaller. The Vehicle Maintenance Facility is smaller, but in the same location, so there would not be any new or different impacts resulting from this redesign.

### **Change in Project Commencement or Completion Date**

Construction of the Green Line Extension started in 2013. While project construction is on hiatus, the MBTA is moving forward with procurement of a Design-Build contractor, with construction projected to start in 2018. The redesigned project reduces the scope of construction and therefore the time to complete construction when compared to the original design. Revenue service is projected to start in 2021, the same year for start of service as had been projected for the original design in the Full Funding Grant Agreement.

### **Change in Project Site**

The project stays within the same alignment and utilizes the same right of way and same basic real estate. While there may be slight shifts (such as at Lechmere Station) that result in different parcels or slivers being used, these changes to the overall right of way plan are marginal within the overall scope of the project.

## **Net Benefits to the Environment**

The Green Line Extension service is anticipated to result in significant air quality, congestion, and land use and economic development benefits. The service plan for the project remains the same. Headways, travel time, trip length, station locations, fare and other key inputs that were included in the travel demand model remain unchanged. Station locations remain unchanged. While the changes to the fare collection may affect dwell time, it is not likely to affect it to a level that would result in any change in ridership that would be reflected in the travel demand model. Implementation of the MBTA's new automatic fare collection system (AFC 2.0) will help reduce dwell time as it will allow boarding at all doors. While some may argue that larger, community based stations attract more riders, the travel demand model is not sensitive enough to predict a change in ridership due to station redesign. As such, the ridership and air quality benefits remain the same.

The land use and economic development benefits of the project remain unchanged, as access to the Green Line transit service remains the same. Today 20% of the population of Somerville is within walking distance of rail transit, which is anticipated to grow to 80% of the population with the implementation of GLX service. MassDOT and the MBTA coordinated with the developers of properties adjacent to the stations through the redesign process to ensure that the redesigned stations remain compatible with their proposed development plans.

## **5 Consistency with Environmental Mitigation Commitments**

MassDOT and the MBTA remain committed to fulfill the environmental mitigation requirements developed through the MEPA review process. The GLX redesign recommendations maintain the environmental mitigation commitments stated in the 2010 Final Environmental Impact Report and Draft Section 61 Findings. Since the MEPA environmental review took place early in the design process, certain mitigation measures have been revised in response to design changes if the adverse impact no longer exists, or alternative measures have been employed to achieve the same mitigation result, for example utilizing sound insulation instead of noise walls for noise mitigation.

As part of the redesign process, the MBTA evaluated the cost-effectiveness of noise barriers as a mitigation measure, and is proposing sound insulation as an alternative measure in certain locations to achieve the necessary mitigation result at lower cost. The mitigation commitment in the FEIR is to "provide noise mitigation in the form of noise barriers or sound insulation to mitigate severe noise impacts". Noise mitigation measures are typically refined as projects proceed through design as had been the case with the GLX. The redesign of noise mitigation measures is consistent with this approach and with the commitment in the FEIR. (See Section 5.1 for additional discussion of noise mitigation.)

In addition, the MBTA is partnering with the City of Somerville to assist in implementation of mitigation measures, whereby the City would take responsibility for construction of traffic and pedestrian improvements on city-streets adjacent to the stations. This is similar to the exiting mitigation commitment for traffic and pedestrian improvements in Cambridge, where the developers of North Point are taking on the responsibility of improvements on city streets around Lechmere Station.

It should be noted that construction of the Somerville Community Path is not a MEPA mitigation requirement; rather, the requirement is to "Complete the final design for the proposed Somerville



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Community Path between Lowell Street and the Inner Belt area. Work with the City of Somerville to identify opportunities for state and Federal funding for construction of the Community Path.”

While the Somerville Community Path has been modified, the change does not warrant new or different environmental review. In both the state and federal documents, the commitment was to design the Community Path. The commitment to build it, and to build it further to Lechmere Station, occurred post environmental review. There was never an environmental commitment to build the Community Path to any terminus location. Community Path advocates have suggested that without the path, ridership would be less than it would be if we built it. When the travel demand model was run by the Central Transportation Planning Staff (CTPS), the Community Path was not included in the build condition, so none of the MBTA’s ridership or air quality projections is predicated on the path. Even if the prior ridership assessment included the Community Path, in a dense urban corridor with very short access trips, the travel demand model is not sensitive enough to show new or additional ridership on transit due to the Community Path.

The list of project and construction period mitigation commitments can be found in Tables 5.1 and 5.2 at the end of the document.

### 5.1 Noise Mitigation

The GLX commitment to mitigate airborne noise impacts at residential and institutional receptors due to train operations on the Green Line Extension Project have been developed based on Federal Transit Administration (FTA) guidelines and include the following:

- Provide noise mitigation to mitigate severe noise impacts,
- Provide mitigation for moderate noise impact where existing day-night average noise levels ( $L_{dn}$ ) are above 65 dBA (exterior); and
- Provide noise mitigation for impacts with no significant outdoor land use if the interior  $L_{dn}$  is above 45 dBA from Project sources, or if single-event maximum noise levels ( $L_{max}$ ) are above 65dBA (interior).

To mitigate noise impact from train operations, the FEIR considered noise control at the source, along the sound path, and at the receiver. Source noise control included special hardware at track turnout locations, relocating special trackwork away from sensitive areas, and using continuous welded rail. Noise barriers are a common sound path noise control treatment that were found to be feasible and effective in many locations because the existing rail right-of way is lower than sensitive receptors for substantial portions of the project. Where noise barriers were not found to be feasible or effective, noise control at the receiver, sound insulation was proposed in the FEIR.

Specific noise mitigation measures were refined and modified during Preliminary and Final Design of the GLX project. Relocating special trackwork eliminated noise impacts in some areas, noise barrier heights and lengths were modified as the design progressed, and in certain locations, sound insulation replaced noise barriers as the recommended mitigation measure. As a result of further design development of the project subsequent to the FEIR the following noise mitigation measures were modified prior to the redesign:

- Sound insulation for the Brickbottom Lofts was changed to two noise barriers, one along the Northeast Façade of the building, and the other along the South Façade of the building.
- Noise barrier N-4: Alston Street/ Cross Street in Somerville was changed to sound insulation due to safety and effectiveness concerns associated with the adjacent Community Path.
- Noise barrier N-8 on Sycamore Street adjacent to the historic Susan Russell House was changed to sound insulation at the request of the owner.
- The noise barrier proposed for Willoughby Street and Murdock Street near Cedar Street on the Medford Branch were determined to no longer be required since relocation of special track work reduced noise impacts below mitigation levels. Double crossovers were proposed at this location at the time of the FEIR. These are no longer required for the project, because as the design progressed a pocket track was located immediately north of Lowell Street Station that would serve their function. There are not any crossovers in the current design in proximity to Willoughby Street.
- The noise barrier at Woodbine Street near Cedar Street on the Medford Branch was determined to no longer be required as noise reduction was expected from the retaining wall in this location.

As part of the redesign effort in 2016 to reduce project costs, all noise barriers were subjected to a cost-effective analysis. As a result of this analysis two of the proposed noise walls (N-5 on the Medford Branch between Cross Street and McGrath Highway and N-13 located on the Medford Branch between Cedar Street and Broadway) were found not to be cost-effective, due to the cost of associated retaining walls at these locations. Changing the mitigation measure to sound insulation allowed for elimination of a new retaining wall (at N-5) with stabilization of the existing retaining wall proposed instead, and the reduction in height of the new retaining wall (at N-13), resulting in cost savings for the project.

The selected Design-Build contractor will be required to conduct a noise impact analysis of their design and confirm noise mitigation measures meet the stated noise mitigation commitments.

## **5.2 GLX Sound Insulation Program**

Where noise walls have been determined not to be cost effective, the MBTA will provide sound insulation as an alternative noise mitigation measure, not to exceed \$50,000 per dwelling unit. The owners of properties that are affected by noise above the impact level will be contacted by the MBTA. These homeowners will select their preferred noise mitigation measures for their property from a list of eligible measures, such as acoustical windows, exterior storm windows, interior window sash, acoustical doors, and wall/ceiling insulation. The homeowner will be responsible for selecting the contractor and obtaining necessary permits, and the MBTA will provide funding for the work to the homeowner in advance, up to the specified dollar limit. The actual amount will be based on an estimate from a Massachusetts licensed contractor for the work. The MBTA's role will be limited to recommending potential noise mitigation treatments and paying for the installation of the treatments selected by the homeowner. Homeowners will be required to enter into an agreement with the MBTA as a condition of proceeding with the installation of sound insulation measures. The MBTA employed a similar program of sound insulation to provide noise mitigation for the Greenbush Commuter Rail project.



**TABLE 5.1: COMPARISON OF PROJECT MITIGATION COMMITMENTS**

Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<b>Traffic and Transportation Systems</b>	
<p>Provide roadway and signal modifications at the following intersections in order to prevent adverse traffic impacts from the project:</p> <p><u>City of Medford</u></p> <ul style="list-style-type: none"> <li>• Boston Avenue at Winthrop Street</li> <li>• Boston Avenue at College Avenue</li> </ul> <p><u>City of Somerville</u></p> <ul style="list-style-type: none"> <li>• Washington Street at McGrath Highway</li> <li>• Prospect Street at Somerville Avenue</li> <li>• Washington Street at Somerville Avenue/Webster Street</li> <li>• Medford Street at Pearl Street</li> </ul> <p><u>City of Cambridge</u></p> <ul style="list-style-type: none"> <li>• Monsignor O'Brien Highway/Route 28 at Third Street</li> <li>• Monsignor O'Brien Highway/Route 28 at Water Street</li> <li>• Monsignor O'Brien Highway/Route 28 at North First Street/East Street/Cambridge Street</li> <li>• Cambridge Street at First Street</li> </ul>	<p>No change in the locations or mitigation elements resulting from the redesign.</p> <p><u>City of Medford</u></p> <p>No change to commitment Boston Avenue at College Avenue will be modified to provide a right hand turn lane on College Avenue on the existing bridge, instead of widening the bridge. A sidewalk will be provided on a new pedestrian bridge to be located adjacent to the existing College Avenue Bridge. Construction of a pedestrian bridge is less costly than widening the existing bridge.</p> <p><u>City of Somerville</u></p> <p>No change to commitment. , Improvements to the intersection of Washington Street and Tufts Street have been added as a mitigation measure. The intersection will be signalized and sidewalks improved. Washington Street will be widened to four lanes between McGrath Highway and Tufts Street. The City of Somerville to implement these mitigation measures instead of the MBTA.</p> <p><u>City of Cambridge</u></p> <p>No change to commitment. Intersection improvements to be completed by the NorthPoint Development.</p>
Optimize traffic signal timing and phasing to maximize the efficiency of signalized intersections in the Proposed Action.	No change; work is incorporated with intersections listed above.

Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
Work with cities to develop station-area parking enforcement plans. No public parking proposed at any station	No change. No public parking proposed at any station. MBTA will continue to coordinate with municipalities on parking enforcement off site.
Work with the MBTA to evaluate opportunities to improve connections between the new stations and existing bus connections.	No change
Work with cities and applicable emergency personnel during design of intersection mitigation measures, including the development of construction management and detour plans.	No change. Construction management and detour plans to be developed as needed.
<p>Provide pedestrian improvements at the following specific locations to improve pedestrian flow and safety:</p> <p><u>City of Medford</u></p> <ul style="list-style-type: none"> <li>• Boston Avenue at North Street</li> <li>• Boston Avenue at Winthrop Street</li> <li>• Boston Avenue between Winthrop Street and College Avenue (mid-block)</li> <li>• Boston Avenue at Harvard Street</li> </ul> <p><u>City of Somerville</u></p> <ul style="list-style-type: none"> <li>• Powder House Rotary</li> <li>• Boston Avenue at Broadway</li> <li>• College Avenue between Boston Street and Frederick Avenue (mid-block)</li> <li>• College Avenue at George Street</li> <li>• Main Street at George Street</li> <li>• Main Street at Harvard Street</li> <li>• Medford Street at Broadway</li> <li>• Main Street at Mystic Valley Parkway Ramps</li> <li>• Main Street at Mystic Avenue</li> <li>• Medford Street at Lowell Street</li> <li>• Medford Street at Central Street</li> <li>• Medford Street at School Street</li> <li>• Medford Street at Pearl Street</li> <li>• Medford Street at Walnut Street</li> <li>• Medford Street at Highland Avenue</li> <li>• Highland Avenue at Lowell Street</li> <li>• Highland Avenue at Central Street</li> </ul>	<p>No change in the locations or mitigation elements resulting from the redesign. Implementation in Cambridge and Somerville will be done by other entities.</p> <p><u>City of Medford</u></p> <p>No change to commitment.</p> <p><u>City of Somerville</u></p> <p>No change to commitment, but City of Somerville to implement instead of MBTA.</p>

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Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<ul style="list-style-type: none"> <li>• Washington Street at McGrath Highway</li> <li>• Washington Street at Tufts Street</li> <li>• Washington Street at Inner Belt Road</li> <li>• Medford Street at Somerville Avenue/McGrath Highway</li> <li>• Washington Street at Somerville Avenue/Prospect Street</li> <li>• Washington Street at Somerville Avenue/Webster Street</li> <li>• Washington Street at Kirkland Street</li> <li>• Prospect Street at Webster Avenue</li> </ul>	
<u>City of Cambridge</u> <ul style="list-style-type: none"> <li>• O'Brien Highway at Third Street</li> <li>• O'Brien Highway at Water Street</li> <li>• O'Brien Highway at North First Street</li> <li>• Cambridge Street at First Street</li> </ul>	<u>City of Cambridge</u> No change to commitment. Pedestrian improvements to be completed by the NorthPoint Development as in EA FONSI.
<b>Noise</b>	
<p>Provide noise mitigation in the form of noise barriers or sound insulation to mitigate severe noise impacts. Provide mitigation for moderate noise impact where existing day-night sound levels (Ldn) are above 65 dBA. Provide mitigation for impacts with no significant outdoor land use if interior noise levels are above 45 dBA from project sources or single-event maximum noise levels (Lmax) are above 65 dBA. Provide noise barriers at the following locations:</p> <ul style="list-style-type: none"> <li>• N1 -Glass Factory Condominiums and Hampton Inn Hotel</li> <li>• N4 -Alston Street</li> </ul>	<p>There is no change in the levels of noise mitigation being provided. At some locations, the MBTA has determined that residential sound proofing is a more cost-effective measure than building noise walls, as is provided for in the FTA Noise and Vibration Assessment Guidance document. The mitigation however, will continue to provide the necessary level of noise reductions and will continue to meet the mitigation requirements in the EIR.</p> <ul style="list-style-type: none"> <li>• No change to commitment. Sound insulation will be implemented for the 6<sup>th</sup> and 7<sup>th</sup> floor of the Hampton Inn, as noise wall is not effective at this height.</li> <li>• N2 – Northeast façade Brickbottom Artist building Noise barrier added as project design advanced.</li> <li>• N3 -South façade Brickbottom Artist building Noise barrier added as project design advanced.</li> <li>• No change to commitment. Mitigation measure changed to sound insulation prior to redesign. Commitment to mitigate noise impacts made in the EIR will continue to be met.</li> </ul>



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Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<ul style="list-style-type: none"> <li>• N5 -Between Cross Street and McGrath Highway (Avon Place)</li> <li>• N6 -Between McGrath Highway and Walnut Street (Gilman Street)</li> <li>• N7 -Between School Street and Sycamore Street (Richdale Avenue)</li> <li>• <i>Willoughby Street (Medford Branch)</i></li> <li>• N8 -Sycamore Street near Richdale Avenue (historic Susan Russell house)</li> <li>• <i>Woodbine Street near Centre Street (Medford Branch)</i></li> <li>• N9 -Vernon Street</li> <li>• N10 -Nashua Street/Henderson Street/Hinckley Street</li> <li>• <i>Murdock Street near Cedar Street (Medford Branch)</i></li> <li>• N11 -Trum Playground</li> <li>• N12 -Cedar Street and Wilson Avenue</li> <li>• N13 -Between Cedar Street and Broadway (Boston Avenue)</li> <li>• N14-Newbern Ave/Morton Ave/Granville Ave</li> <li>• N15 -Burget Avenue</li> </ul>	<ul style="list-style-type: none"> <li>• No change to commitment. Mitigation measure changed to sound insulation prior to redesign. Commitment to mitigate noise impacts made in the EIR will continue to be met.</li> <li>• No change to commitment</li> <li>• No change to commitment</li> <li>• No longer required because the impact was eliminated due to relocation of special trackwork as design advanced.</li> <li>• No change to commitment. Mitigation measure changed to sound insulation prior to redesign. New mitigation proposed as part of Section 106 consultation process and approved by the consulting parties.</li> <li>• No longer required due to the noise reduction expected from the retaining wall.</li> <li>• No change to commitment</li> <li>• No change to commitment</li> <li>• No longer required because the impact was eliminated due to relocation of special trackwork as design advanced.</li> <li>• No change to commitment</li> <li>• No change to commitment</li> <li>• No change to commitment. Mitigation measure changed to sound insulation prior to redesign. Commitment to mitigate noise impacts made in the EIR will continue to be met.</li> <li>• No change to commitment</li> <li>• No change to commitment</li> </ul>



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Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<ul style="list-style-type: none"> <li>N16 -Horace Street</li> <li>N17 -Walnut Street Center</li> </ul>	<ul style="list-style-type: none"> <li>No change to commitment. Barrier has been constructed.</li> <li>No change to commitment. Noise barrier reduced in length due to change in use at Walnut Street Center, which eliminated the sensitive receptor at that location.</li> </ul>
<p>Provide sound insulation improvements at the following locations:</p> <ul style="list-style-type: none"> <li>Pearl Street Apartment building</li> <li>Outside the Lines Studio</li> <li>Tufts University Science and Technology Center</li> </ul>	<ul style="list-style-type: none"> <li>No change to commitment</li> <li>No change to commitment</li> <li>No change to commitment. Tufts University completed sound insulation.</li> </ul>
<p>Monitor Noise after service starts with the proposed mitigation in place) to evaluate whether the actual noise levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.</p>	<p>No change to commitment</p>
<b>Vibration</b>	
<p>Provide vibration mitigation in the form of ballast mats or resilient rail fasteners and relocated or specially-engineered special tract to mitigate vibration impacts at the following locations:</p> <ul style="list-style-type: none"> <li>V1: Glassfactory Condominiums</li> <li>V2: Brickbottom Artists Building (Northeast Façade)</li> <li>V3: Brickbottom Artists Building (South Façade)</li> <li>V4: Alston Street (south of Cross Street)</li> <li>V5: Tufts Street/Avon Pl/ Auburn Ave South of Cross to McGrath Highway</li> <li>V6: Gilman Street (McGrath Highway to Walnut)</li> <li>V7: Medford Street (North of Walnut)</li> <li>V8: Pearl Street Apartment</li> <li>V9: Richdale Avenue</li> </ul>	<p>There are no changes in commitments for vibration mitigation.</p> <ul style="list-style-type: none"> <li>No change</li> <li>No change</li> <li>Added as design advanced.</li> <li>No change</li> <li>No change</li> <li>No change</li> <li>No change</li> <li>No change</li> <li>No change</li> </ul>

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Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<ul style="list-style-type: none"> <li>• <i>Jerome Court (near Sycamore Street)</i></li> <li>• V10 -Lowell Street/Nashua Street/Hinckley Street/Berwick Street (Lowell Street to Charles E Ryan Road)</li> <li>• V11 -Murdock Street (south of Cedar Street)</li> <li>• V12 -Cedar Street (north of Cedar Street)</li> <li>• V13 -Newbern Avenue/Morton Avenue/Granville Avenue/Winchester Place/Wareham Street (Broadway to Warren Street)</li> <li>• V14 -Tufts University Science and Technology Center</li> <li>• V15 -Tufts Bacon Hall</li> <li>• V16 -Outside the Lines Artist Studio</li> <li>• V17 -Tufts Bray Laboratory</li> <li>• V18 -Tufts Curtis Hall</li> <li>• <i>Brooking Street</i></li> <li>• V19 -Horace Street</li> </ul>	<ul style="list-style-type: none"> <li>• No longer needed as impact eliminated due to due to advanced design.</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• No change</li> <li>• Combined with V17 – Tufts Bray Laboratory</li> <li>• No change</li> </ul>
<b>Hazardous Materials</b>	
Consult with MassDEP during design and construction to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.	No change

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Environmental Mitigation Measures Identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation Measures for the GLX Redesign
<b>Land Use</b>	
Work with the community in the area of the future Mystic Valley/Route 16 to consider land use and station design elements.	No change. Not included in the current project. To be completed by next phase of the GLX.
Complete the final design for the proposed Somerville Community Path between Lowell Street and the Inner Belt area. Work with City of Somerville to identify opportunities for state and Federal funding for construction of Community Path.	Final design for a revised community path to be completed by Design-Build contractor.
<b>Water Quality/Stormwater</b>	
Implement all aspects of the SWPPP including recommendations in annual updates based on new or improved procedures or changes to operations.	No change
<b>Visual Environment</b>	
Provide vegetation on and/or above retaining walls to minimize visual changes.	Loam and seed on private property. Compensate for damaged shrubbery.
Work with affected communities on design of noise barriers and vegetated walls.	Walls will meet criteria agreed to with the community.
<b>Cultural Resources and Section 4(f) Resources</b>	
Perform archival photographic and written documentation of historic structures to be removed or altered. (Lechmere Station/Lechmere Viaduct, Somerville Automobile Company Building)	Photography and documentation has been completed.
Submit design plans and construction specifications for project elements that affect above-ground historic properties for review by MHC, local historical commissions, and the Design Working Group.	No change. Design review by the Section 106 consulting parties was completed. The re-design needs to be resubmitted to the parties. The DB contractor will be required to provide the MBTA with 30%, 60% and 90% design plans that will be resubmitted to the Section 106 parties as required by the Section 106 MOA.



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Construct noise barrier adjacent to historic Susan Russell House with context-sensitive materials and colors.	No change in commitment to mitigate noise impacts. Noise barrier was changed to sound insulation as owner request. Massachusetts Historical Commission has approved
<b>Public Involvement</b>	
Continue civic engagement opportunities during the design process. Provide transparent public information and outreach process through construction.	No change.
Engage interested parties through the Design Working Group.	The Design Working Group was engaged during the redesign process and will continue to be engaged throughout the project. It will transition to a Construction Working Group as the project progresses. The MBTA will be appointing a new GLX Community and Stakeholder Engagement person to focus full time on the issues surrounding GLX.
Conduct land use workshops with affected communities to further identify community needs and issues near the proposed station areas.	Station area workshops have been completed.
<b>Design</b>	
As design advances, facilitate future transit/transportation projects such as light rail expansion or connections to existing infrastructure to the extent possible.	Future transit/ transportation projects not precluded by GLX redesign.
Implement “green” design elements (recycled or recyclable materials or incorporate vegetation) in design of proposed retaining walls, stations and maintenance and storage facility.	A Sustainability Plan will be developed for the redesign.
During design, refine project designs to further minimize temporary and permanent impacts on local neighborhoods and property owners.	No change to commitment
Design all stations in compliance with ADA standards, Massachusetts AAB standards; MBTA’s settlement agreement with the Boston Center for Independent Living (BCIL) and applicable National Fire Protection Association standards.	No change. The project will be designed in compliance with all applicable standards

## 5.2 COMPARISON OF CONSTRUCTION MITIGATION COMMITMENTS

Environmental Mitigation identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation for the GLX Redesign
<b>General</b>	
Prior to construction, prepare a detailed plan to address various construction period impacts to various environmental resources (vehicular traffic, pedestrian and bicycle, on-street parking, public access, emergency access to local businesses and residences, dust, noise, odor, rodents, construction-related nuisance conditions) through coordination with cities and appropriate emergency personnel.	<p>No change. DB contractor will be required to prepare construction management plan (CMP) and mitigation plan which will be shared with communities.</p> <p>The CMP will address all of the construction period related issues articulated in the EIR. The re-design does not change these requirements, nor is the MBTA seeking to change any of them.</p>
<b>Traffic and Transportation Systems</b>	
Establish temporary detours to minimize traffic disruptions due to construction.	No change
Stage bridge construction to ensure that adjacent bridges are not closed simultaneously.	No change
Work with cities and applicable emergency personnel to ensure that appropriate safety measures are incorporated throughout construction.	No change
<b>Air Quality</b>	
Apply water to dry soil to prevent dust production. Use water for compaction in the fill areas and as a dust retardant in both the soil cut areas and haul roads.	No change
Comply with MassDEP's idling regulations. Post idling restriction signage on project construction sites.	No change
Follow existing MassDEP's Solid Waste and Air Quality Control regulations and MBTA retrofit procedures for construction equipment to reduce emissions.	No change
<b>Noise</b>	
Prepare a Noise Control Plan in conjunction with the contractor's specific equipment and methods of construction.	No change

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Environmental Mitigation identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation for the GLX Redesign
Use specially quieted equipment with enclosed engines and/or high-performance mufflers.	No change
Perform construction equipment noise certification testing.	No change
Avoid nighttime construction in residential neighborhoods.	In order to expedite construction, nighttime work may occur only with full coordination with the communities and abutting neighborhoods.
Require ambient-adjusting or manually adjusted backup alarms set to 5dBA over background levels.	No change
Keep truck idling to a minimum.	No change
Set acoustic shield requirement for jackhammers, chainsaws, and pavement breakers.	No change
Develop methods for projecting construction noise levels.	No change
Develop methods for responding to community complaints.	No change
Establish a protocol for reporting noise monitoring results, noise reduction measures used, and responses to the community.	No change
Use shields, shrouds, or intake and exhaust mufflers to control construction noise level.	No change
Apply noise deadening materials to chutes or storage bins.	No change
Install temporary noise barriers.	No change
Apply acoustic enclosures.	No change
Implement specialized back-up alarms.	No change
Limit the size of generators and the duration of their use.	No change



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Environmental Mitigation identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation for the GLX Redesign
Develop truck routes that minimize exposure to noise-sensitive sites.	No change
Develop other detailed engineering noise control measures, as appropriate.	No change
Route construction equipment and vehicles through areas that would cause the least disturbance to nearby receptors where possible.	No change
Fit any air-powered equipment with pneumatic exhaust silencers.	No change
Locate stationary construction equipment as far as possible from noise-sensitive sites.	No change
Construct noise barriers, such as temporary walls or piles or excavated material, between noisy activities and noise-sensitive receivers.	No change
Monitor noise after service starts (with the proposed mitigation in place) to evaluate whether the actual noise levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.	No change
<b>Vibration</b>	
Configure truck routes that minimize exposure to vibration sensitive receptors and maintain smooth roadway surfaces.	No change
Avoid nighttime construction in residential neighborhoods.	In order to expedite construction, nighttime work may occur only with full coordination with the communities and abutting neighborhoods.
Use alternative construction methods to minimize the use of impact and vibratory equipment (e.g., pile drivers and compactors).	No change
Monitor vibration after service starts (with the proposed mitigation in place) to evaluate whether the actual vibration levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.	No change

Environmental Mitigation identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation for the GLX Redesign
<b>Water Quality/Stormwater</b>	
Install detention and infiltration systems to infiltrate peak runoff and to prevent any increase in peak flows to municipal stormwater drainage systems and to remove TSS from stormwater runoff prior to discharge.	No change
Install hydrodynamic particle separators to treat pavement runoff.	No change
Use Low Impact Development practices, where feasible, to maintain natural hydrology (e.g., raingardens to treat disconnected roof drainage and/or parking runoff).	No change
Develop and implement a SWPPP in accordance with NPDES and MassDEP standards.	No change
Stabilize any highly erosive soils with erosion control blankets and other stabilization methods, as necessary.	No change
Reinforce slopes using a hydroseed mix with a resin base, native vegetation, or other approved methods.	No change
Use dewatering controls, if necessary.	No change
Install a gravel entrance at construction sites to prevent sediment from being tracked onto roadways and potentially discharged to surface waters.	No change
Maintain construction equipment to prevent oil and fuel leaks and install catch basin protection as needed.	No change
<b>Hazardous Materials</b>	
Consult with MassDEP to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.	No change
Follow all protocols to adequately characterize, stockpile and dispose of materials encountered during construction.	No change

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Environmental Mitigation identified in the Final Environmental Impact Report	Comparison to the Environmental Mitigation for the GLX Redesign
<b>Outreach</b>	
Establishing a project construction office.	No change
Establishing a Green Line Extension project Ombudsman position that would field all construction-period comments and complaints, coordinate with the cities, and respond to public concerns.	No change
Establish a Construction Working Group to advise MassDOT and the MBTA.	No change
Establish a project email address and 24-hour phone hotline for public concerns.	No change
Provide frequent website updates of construction activities at <a href="http://www.mass.gov/greenlineextension">www.mass.gov/greenlineextension</a>	No change
Host neighborhood construction kick-off meetings.	No change
Produce quarterly construction updates.	No change
Develop a business outreach plan to assist local businesses during construction.	No change

## 6 Stakeholder Engagement

During the GLX review and re-procurement process, the MBTA has recognized and remains firmly committed to the Public Involvement Plan (PIP) set forth in section 6 of the Secretary's Certificate on the DEIR for the GLX Project. In addition to meeting the goals and objectives of the PIP, the GLX project also continues to meet the requirements for public engagement specified in the FTA Finding of No Significant Impact. GLX stakeholder engagement specifically seeks to continue the **four** principal goals established in the original GLX PIP as follows:

- To provide an interactive, collaborative, and credible public process;
- To equip the design team with ideas and recommendations from the public that would inform the design of the GLX;
- To solicit input from local residents and businesses, local and regional government agencies, and interest groups; and



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- To provide methods to keep residents, business owners and municipal officials informed about construction, its potential impacts and schedule, and to lessen those impacts as much as possible.

In addition to these stated goals, the interim team also committed to providing a transparent process to keep stakeholders apprised of:

- The substantial cost pressures and fiscal challenges currently affecting the viability of the GLX Project;
- The establishment of a new GLX baseline (scope, schedule, and cost)
- A new construction cost estimate and methodology
- A new schedule and methodology
- Project delivery re-procurement recommendations
- A newly proposed project management structure; and
- The schedule, conditions, and processes driving a decision to eliminate, mothball, or proceed with the GLX project.

**Communities Engaged**

GLX stakeholder engagement continues to focus on the cities of Cambridge, Medford, and Somerville, their residents, municipal governments, elected officials, agencies, and staff. Under this umbrella, the project maintains outreach and engagement with community and business organizations, MBTA users and user groups, and numerous stakeholder organizations (e.g., Conservation Law Foundation, Friends of the Community Path, corridor institutions, developers, land owners, and abutters).

**GLX Review and Redesign Outreach**

During the GLX review and redesign period from January through August of 2016, the project held a series of six prominently advertised and well attended public meetings within the primary areas of impact. Meeting announcements were distributed well in advance using standard news releases, Tweets, and frequent postings to the [GLX website](#). In addition, nearly 5,000 interested parties who voluntarily registered with the GLX site receive all meeting announcements via email.

**GLX Review Public Meetings**

A total of four public meetings and two GLX Design Working Group meetings were scheduled between March 2nd and April 27th, 2016 to raise awareness on the status of the project and solicit input from the general public.

**Open Houses**

Each public meeting began with a one-hour open house discussion where community residents had an opportunity engage directly with project staff, learn about proposed changes to the project, and ask specific questions. These open houses include graphics to help guide the discussions between the public and staff members.

### **Presentations**

The open house sessions were followed by a brief presentation focusing on a unique set of items under consideration for redesign. The presentations may be found on the GLX website.

### **Public Comment Periods**

Public comment periods followed presentations at each meeting during which elected officials and community residents provided input for consideration. All comments were documented, posted to the GLX website, and shared with the GLX Review team as well as members of the MassDOT Board and members of the MBTA Fiscal & Management Control Board.

### **Public Meeting Snapshots**

1. On March 2, 2016, more than 400 attendees packed the Somerville Armory to engage with project staff and listen to a presentation by the MBTA and its consultants. Afterward, public comments were received from approximately 12 local elected officials and more than 50 local stakeholders.
2. A second public meeting held at Tufts University on March 23, 2016 featured a one-hour Open House followed by statements from then MBTA General Manager Frank DePaola and a presentation by the GLX project team. The meeting drew more than 125 attendees, including Medford Mayor Stephanie Burke, Somerville Mayor Joseph Curtatone, State Senator Patricia Jehlen, State Representative Christine Barber, and more than 40 local residents who delivered public comments.
3. On April 13, 2016, a GLX public meeting was held at Somerville High School to focus specifically on the status and redesign of the Community Path. The meeting attracted more than 360 attendees, including a strong showing of city officials and legislators from Cambridge and Somerville. MBTA General Manager Frank DePaola provided opening remarks followed by presentations from the GLX project team. Approximately 44 attendees followed the presentations with individual public comments.
4. The April 27, 2016 GLX public meeting held at Saint Anthony's Parish Hall in Cambridge drew more than 90 attendees. MBTA General Manager Frank DePaola presented opening remarks followed by a presentation by the GLX project team. The presentation included an overview of the latest redesign. Public comments were led by State Representative Timothy Toomey who was followed by approximately 20 attendees who provided public comment.
5. In addition to the four general public meetings held by the GLX project team and two with the GLX Design Working Group, a long-standing group of local residents, hosted two additional meetings which were prominently advertised and open to the general public. These meetings, held on February 5th, and March 30th, 2016 at the Somerville Armory and Somerville High School respectively, explored critical design items and other

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issues of public concern. A comment period was scheduled at the end of each session to solicit public feedback on a broad range of GLX design items and policy matters.

Presentations delivered at all GLX Public Meetings are posted online under “Documents” at <http://greenlineextension.eot.state.ma.us/index.html>.

### Ongoing Meetings with State and Municipal Elected Officials, and Agencies

Beyond public meetings, periodic meetings designed to keep Cambridge, Medford, and Somerville officials apprised of project developments continue to be held on a regular basis. In addition, monthly updates on progress are given to the MBTA Fiscal & Management Review Board and MassDOT board which are open to the public.

[INFO@GLXINFO.COM](mailto:INFO@GLXINFO.COM)

Throughout the history of the GLX project, interested parties have been encouraged to register online to receive updates and meeting notices, etc. The [GLX Website](#) has evolved over a number of years into a popular resource for tracking the project and obtaining the latest project information. Website materials include; general information, construction updates, recent announcements, upcoming meetings, meeting minutes, reports, presentations, fact sheets, and an extensive array of project documents and records spanning the entire life-cycle of the project.

### Pre-Procurement Outreach

The GLX project transitioned from its interim review and redesign phase to its pre-procurement phase September 1, 2016. While design-build procurement is characteristically focused on construction industry outreach and the drafting of technical documents (such as the project’s Request for Proposal (RFP)), GLX officials continue to keep project stakeholders apprised of developments.

In addition to regular meetings with local officials from Cambridge, Somerville, and Medford; recent third-party and public meetings include:

- A meeting to update the Friends of the Community Path (December 5, 2016)
- A general public meeting at Somerville High School (December 7, 2016)
- A general public meeting at Medford City Hall (December 14, 2016)
- Ongoing meetings with local developers, corridor institutions, and impacted abutters

### Procurement Outreach (Issuance of Request for Proposals through Notice to Proceed with Construction)

The MBTA will be responsible for the overall Community Outreach Program that will be in effect during both engineering and construction phases. MBTA may assign specific community outreach duties to others in accordance with the Public Involvement Plan and the Construction Management Plan. The Community Outreach Program is intended to work alongside the technical and design work efforts while



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conforming to MBTA and MassDOT policies. It requires a careful mix of activities and interactions designed to inform Stakeholders about the progress of the project and to receive feedback from stakeholders that may mitigate impacts.

During each phase of the project, outreach activities will be scheduled and structured to reflect the project's demographic and commercial diversity; and to facilitate open communication, problem resolution, and consensus building.

The Community Outreach Program is designed to engage:

- Residents and businesses of the affected communities, including Cambridge, Somerville and Medford;
- Community-based organizations, neighborhood advocacy groups, and civic groups;
- Elected officials and staff at each affected municipality;
- The general public including current and future MBTA users; and
- Environmental justice populations in Cambridge, Somerville and Medford.

In addition, the program provides a forum for affected communities and other stakeholders, to express concerns allowing for the MBTA to identify and address new or unanticipated local priorities and issues.

The Public Involvement Plan (PIP) referenced earlier in this section, describes the elements of the Community Outreach Program for the design and construction phases of the project. The components of the Program include:

- Targeted stakeholder meetings, including informative meetings for residents, businesses and property owners near the stations, maintenance facility and/or Community Path;
- Outreach that is tailored for environmental justice and disabled populations, including making interpreters available at meetings upon request;
- General information meetings and public hearings for all stakeholders;
- Printed materials, including fact sheets, brochures, and newsletters when appropriate;
- Dedicated GLX website;
- Project phone number for public inquiries with monitored responses to concerns;
- Email contacts for the public to ask questions and for the GLX Team to respond;
- Email blasts of project materials to contact lists of stakeholders who wish to be kept informed;
- Advertisements in community and neighborhoods relative to project milestones; (translating key notices into Spanish and other languages upon request) to ensure participation of non-English speaking stakeholders;
- Presentations, informing stakeholders so they may better visualize the completed project;
- Electronic media postings to focus on project highlights and progress to date; and
- Periodic reviews of the effectiveness of the public involvement program to ensure that full and open access is being provided to all who have an interest in the project.

During the design phase, the primary emphasis will be on (1) keeping the public informed of important milestones, and (2) presentations as needed that include mitigation measures agreed to through the MEPA/NEPA process. As issues specific to individual neighborhoods arise, meetings will be organized with community boards, elected officials, and neighborhood groups to provide information on any plan that may directly affect the public and to solicit their input. Interactions with these local groups will provide

insights into potential construction-related issues, and contractor needs, while continuing to inform the community.

### **Construction Phase**

As the project moves into construction, the MBTA will continue with a robust community outreach program. During the construction phase, the MBTA will be actively involved in the widespread dissemination of construction bulletins to alert customers, residents, businesses, and other concerned parties about planned construction activities and potential disruptions and inconveniences. These notifications will supplement newsletters and website updates. Mailing and email lists will be updated to verify that the appropriate organizations, agencies, officials, and concerned individuals are receiving project materials, in addition to their participation in ongoing meetings.

A Construction Working Group will be established. Appropriate construction staff will meet, as required, and briefings to the various stakeholders will be scheduled, as needed, to make certain that the lines of communication are open and maintained until the project is completed. As construction nears completion, the focus of the public awareness program will shift to support the opening of the GLX project.

## **2. Secretary's Certificate on the Final Environmental Impact Report**







*The Commonwealth of Massachusetts*  
*Executive Office of Energy and Environmental Affairs*  
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July 30, 2010

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS  
ON THE  
FINAL ENVIRONMENTAL IMPACT REPORT

PROJECT NAME	: Green Line Extension
PROJECT MUNICIPALITY	: Cambridge, Medford and Somerville
PROJECT WATERSHED	: Boston Harbor
EOEA NUMBER	: 13886
PROJECT PROPONENT	: Massachusetts Department of Transportation (MassDOT)
DATE NOTICED IN MONITOR	: June 23, 2010

As Secretary of Energy and Environmental Affairs, I hereby determine that the Final Environmental Impact Report (FEIR) submitted on this project **adequately and properly complies** with the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62I) and with its implementing regulations (301 CMR 11.00).

The Green Line Extension Project involves the extension of the existing Massachusetts Bay Transportation Authority (MBTA) Green Line north of its current terminus at Lechmere Station to further service the communities of Cambridge, Somerville and Medford. The current phase of the project involves construction of six new Green Line stations along two branches (Medford Branch and Union Square Branch), along with the reconstruction and realignment of Lechmere station. The project also expects to further extend the Medford Branch to Mystic Valley Parkway/Route 16 in the future.

The project is one of the most significant remaining transit commitments arising out of the Central Artery/Tunnel Project (CA/T), and will significantly reduce vehicle trips and related air emissions while increasing access to fast and reliable public transit service in historically under-served areas. The project will support anticipated ridership of over 50,000 trips per day once completed. The project represents a major investment by the Commonwealth in urban mass

transit in an effort to provide critical transportation, air quality, greenhouse gas reduction and urban redevelopment benefits along the project corridor. Although the project is not projected to be in service until 2015, the conclusion of MEPA review is a major milestone towards eventual completion of the Project and achievement of these significant public and environmental benefits.

The FEIR filed by the project Proponent, the Massachusetts Department of Transportation (MassDOT), is the culmination of many years of effort by the Commonwealth's transportation agencies to study and design this critically important project. I would like to extend my ongoing appreciation to MassDOT for its efforts to fund and build the project in a manner that minimizes environmental impacts and incorporates the substantial public input that has been generated in the MEPA process and elsewhere. I would also like to express my gratitude to elected officials, municipal and State employees, special interest, advocacy and community groups, business leaders, and individuals who have been active participants in the public outreach process, through their attendance at meetings, preparation of thoughtful comment letters, and willingness to work collaboratively with MassDOT. I believe that the public dialog conducted to date has resulted in an improved project that better meets the needs of Green Line riders and neighbors alike. Although I am concluding the MEPA review process for this project, I anticipate that public participation in the project (in accordance with the public involvement plan established in the FEIR) will continue to be strong as the project proceeds to design and construction.

As with the DEIR, the FEIR document has generated significant public input including hundreds of comment letters representing a range of views about numerous aspects of the project. I have received comment letters from elected officials and municipal representatives including U.S. Representative Capuano, State Senator Jehlen, State Representative Provost, State Representative Sciortino, State Representative Toomey, Medford Mayor McGlynn, Somerville Mayor Curtatone and the City of Cambridge. I have also received comments from multiple city, State and regional agencies, from environmental, bicycle and pedestrian advocacy groups, from neighborhood groups, from groups that represent the disabled and environmental justice populations, and from businesses and residents.

As reflected in the size and scope of the MEPA review documents, the content of comment letters, and the overwhelming public interest in this project, extension of any light rail service through an active urban corridor such as Cambridge, Somerville, and Medford is a challenging and complex endeavor. However, throughout the MEPA process, the majority of comment letters have generally expressed overall support for the concept of expanding light rail service to the affected communities. Comments on the FEIR reflect a unified desire to protect and enhance the character and vitality of the corridor as a whole, as well as its neighborhoods, individual residences, and business centers. Not surprisingly, recommendations for how the project can achieve these goals in a successful fashion vary widely among project constituents. General topics presented in the FEIR comment letters include, but are not limited to: the construction of the Community Path, design refinements to the Option L maintenance facility, design refinements in the vicinity of College Avenue and Lechmere Stations, enhancements to the proposed Public Involvement Plan (PIP), and outstanding questions concerning various mitigation efforts.

Many comments on the FEIR provided commentary on design elements and project specifics that have yet to be determined given the current stage of design. The MEPA process



occurs early in the design process to identify key environmental concerns and challenges associated with a project. MEPA review therefore necessarily takes place in advance of final project design and does not generally address issues commensurate with those typically reviewed at the local site plan review or zoning board review levels within each municipality. Resolution of the final project planning details will fall primarily to MassDOT, the affected communities, and to the various project stakeholders. It is beyond the scope of MEPA to serve as a forum for reconciliation of all of the identified (and sometimes competing) concerns associated with the project. As memorialized later in this Certificate, MassDOT has committed to a broad range of project mitigation measures and established a PIP. I am confident that these measures identified in the FEIR, along with the established criteria set forth in Federal, State and municipal regulations and guidelines pertaining to noise, vibration, stormwater, hazardous materials, air quality, and traffic, and the establishment and adherence to Best Management Practices (BMPs) during the construction and operations period, will ensure that the project will avoid, minimize and mitigate Damage to the Environment as required by MEPA.

I am also confident that MassDOT can and will address those issues that are beyond the scope of MEPA responsibly and thoroughly. As project design advances, the MBTA will become the lead agency on the project and will ultimately be responsible for the construction and operation of the service. The recent integration of the transportation agencies provides new opportunities for efficient coordination among MassDOT and the MBTA on the planning, design, and eventual construction of the Green Line Extension. To ensure effective implementation and operation of the project, I encourage both agencies to continue their collaborative relationship and embrace the proposed civic engagement process outlined in the PIP.

Finally, the scope for the FEIR was limited to several key topics, as discussed later in this Certificate. Given the broad scope of potential environmental impacts of the project, in the Certificate on the DEIR, I provided guidance and recommendations for the project as it proceeds to preliminary and final design and ultimately the construction period. I remind MassDOT that while some of these topics were not selected for additional review in the FEIR (i.e., compliance with the Massachusetts Contingency Plan, land use, traffic and transportation, etc.), the direction provided in the Certificate on the DEIR remains and should be addressed during the appropriate portion of project advancement. This guidance should supplement any additional recommendations outlined in this Certificate on the FEIR. MassDOT should use the comments received on the FEIR to further inform the project's preliminary and final design process, provide additional refinement to the PIP, guide collaborative efforts with Federal, State and municipal permitting agencies, and to enlighten project mitigation efforts along the corridor.

### Project Description

As described in the FEIR, the project consists of the extension of Green Line light rail service from a relocated Lechmere Station through Cambridge, Somerville, and Medford. The "proposed project" in the FEIR includes:

- The Medford Branch - Extending Green Line service to Medford within the existing MBTA Lowell Line commuter railroad ROW, from a newly relocated Lechmere Station

- terminating at College Avenue with intermediate stations at Brickbottom, Lowell Street, Gilman Square, and Ball Square;
- The Union Square Branch – Extending Green Line Service to Union Square in Somerville, within the existing MBTA Fitchburg Line commuter rail ROW, with a station at Union Square;
  - Construction of seven new transit stations:
    - Relocated Lechmere Station, Cambridge;
    - Brickbottom Station, Somerville;
    - Gilman Square Station, Somerville;
    - Lowell Street Station, Somerville;
    - Ball Square Station, Medford;
    - College Avenue Station, Medford; and
    - Union Square Station, Somerville;
  - Relocation of existing commuter rail lines, construction of approximately four miles of new light rail track and systems, potential relocation, removal and/or elimination of freight tracks, four multi-span viaducts, a vehicle maintenance and storage facility (Maintenance Facility), and reconstruction of 11 bridge structures along the project corridor;
  - Completion of 100-percent of the planning, design, and engineering for the proposed extension of the Somerville Community Path between Lowell Street and Inner Belt Road; and
  - Construction and/or implementation of measures to mitigate potential project operational and construction period impacts associated with, but not limited to: noise and vibration, traffic (vehicle, pedestrian, bicycle), air quality, stormwater, hazardous materials management, historical and cultural resources, land use, and ongoing public involvement.

As first presented in the DEIR, current fiscal constraints have led MassDOT to propose constructing the Green Line Extension project in two phases, the first of which is that reviewed in the FEIR with a terminus of the Medford Branch at College Avenue station. The second, future phase (Phase II) extending the Medford Branch to Mystic Valley Parkway/Route 16 was not the subject of this FEIR. When the second phase of the project is advanced, MassDOT will need to file a Notice of Project Change (NPC) in accordance with 310 CMR 11.10 to initiate additional MEPA review. I expect that this NPC will present additional (and updated) information on the potential environmental impacts of this segment for review by interested parties, as the DEIR presented a ‘worst case scenario’ of possible environmental impacts based on currently available conceptual designs. This NPC will be required to address how this portion of the project avoids, minimizes, and mitigates Damage to the Environment as defined by the MEPA regulations and present additional station design alternatives and existing and proposed conditions data on potential environmental impacts along this section of the corridor.

I encourage MassDOT to consider the comments and design suggestions submitted in response to the DEIR and FEIR when preparing the NPC for Phase II. Furthermore, it is my understanding that MassDOT is working with the Metropolitan Area Planning Council (MAPC) to establish a planning study process for the future extension of the Green Line to a Mystic Valley Parkway/Route 16 station. Finally, ‘flex funding’ allocated by the Boston Area Metropolitan Planning Organization may be available sometime between 2016 and 2020 to assist in funding the construction of the Green Line College Avenue to Mystic Valley Parkway/Route 16 segment. I



anticipate that MassDOT will continue to strongly advocate for planning efforts and funding sources for the design and construction of the Phase II between now and 2016 or beyond as necessary.

As I stated in the Certificate on the DEIR, the project corridor passes through a wide cross-section of land uses: industrial, commercial, institutional, and residential. The project will provide access to a dense population of potential and existing transit riders currently serviced primarily by bus service along 15 established routes. Several of the station locations provide unique opportunities for transit-oriented redevelopment, potentially spurring economic development within the corridor. The corridor lends itself well to increasing the multi-modal transportation experience, with connections to the existing street and neighborhood network, as well as the conceptually designed Community Path.

The FEIR stated that the project is expected to increase the MBTA's anticipated daily ridership at the project's seven stations (boardings and alightings) by approximately 52,000 by 2030, with approximately 90% of these trips to take place in the project's opening year. The Green Line would also see an increase of 30,700 boardings and the entire MBTA system would see an increase of 7,900 new daily linked transit trips as a result of extension of the Green Line service. The project is estimated to reduce vehicle miles travelled (VMTs) by 25,018 per day (projected to the year 2030). Based on the current ten-percent concept level design, the FEIR estimated the overall project cost at approximately \$844.5 million (in 2009 dollars), including \$79.3 million for 24 new Green Line vehicles. Annual operating and maintenance costs are estimated at \$22.1 million (in 2009 dollars). With anticipated increases in inflation over the course of project implementation, "Year-of-Expenditure" (YOE) capital costs for the project are calculated to be approximately \$953.7 million on YOE dollars.

### Procedural History

The Expanded Environmental Notification Form (EENF) was submitted for MEPA review and noticed in the Environmental Monitor on October 10, 2006. On December 1, 2006, Secretary Gollodge issued a Certificate on the EENF outlining the scope for the DEIR.

As part of the EENF, MassDOT requested in accordance with 301 CMR 11.05(7) that it fulfill its EIR obligations under MEPA with a Single EIR, rather than the usual process of a Draft and Final EIR. The Secretary declined to grant this request for reasons discussed in the Certificate on the EENF. The DEIR received an extended comment period of 75 days, commencing on October 26, 2009 and concluding on January 8, 2010. On December 9, 2009, MassDOT issued supplemental information regarding the potential location of the Green Line vehicle storage and maintenance facility (Maintenance Facility), presenting a qualitative analysis of two additional Maintenance Facility sites (Mirror H and Option L) beyond the preferred alternative presented in the DEIR.

Within the DEIR, MassDOT requested that the DEIR be considered as the FEIR in accordance with 301 CMR 11.08(8)(b)(2). I determined that while the DEIR generally responded to the requirements of 301 CMR 11.07 and the Scope, the ongoing evaluation of maintenance facility siting alternatives, the need for additional discussion of impacts at College Avenue and



Lechmere Stations, and a requirement for clarification of the future mitigation and community participation commitments, precluded me from exercising my rights to declare that the DEIR would be considered an FEIR.

The FEIR was filed with the MEPA office and noticed in the Environmental Monitor on June 23, 2010. On July 7, 2010, MassDOT made a memorandum prepared by the Central Transportation Planning Staff (CTPS) entitled, *Medford Hillside Neighborhood Included in the College Avenue Walk Market Area – Methodology and Data Sources* available for consideration during the FEIR comment period. The FEIR received a 30-day comment period, concluding on July 23, 2010. This Certificate concludes this stage of the MEPA review process for the project as presented and reviewed in the FEIR.

### Project Permitting and Jurisdiction

The project is subject to review and mandatory preparation of an EIR pursuant to Sections 11.03 (1)(a)(1) and (6)(a)(5) of the MEPA regulations because it is being undertaken by a State Agency and will: alter more than 50 acres of land; and consists of a new rail or rapid transit line along a new, unused or abandoned right-of-way for transportation of passengers or freight, respectively. The project will require Access Permits from MassDOT. The project will require an 8(m) Permit from the Massachusetts Water Resources Authority (MWRA). It will require a Determination of Effect to Historic or Archaeological Resources (Section 106 of the National Historic Preservation Act) and a Section 4(f) Determination by the Federal Transit Administration (FTA). It will require review by the Massachusetts Historical Commission (MHC). Also, it will require a National Pollutant Discharge Elimination System (NPDES) industrial permit and a Multi-Sector General Permit for Stormwater Discharges Associated with an Industrial Activity (MSGP) from the United States Environmental Protection Agency (U.S. EPA).

Because the Proponent is a State Agency and will use State funding, MEPA jurisdiction for this project is broad and extends to all aspects of the project that are likely, directly or indirectly, to cause Damage to the Environment as defined in the MEPA regulations.

It should be noted that the project is also undergoing review under the National Environmental Policy Act (NEPA) because MassDOT is seeking federal funding for the project. While the DEIR also served as the Environmental Assessment (EA) in accordance with NEPA, at the request of the Federal Transit Administration (FTA), MassDOT is preparing a separate Final EA from this FEIR. MassDOT had indicated in the DEIR that because the proposed project would be primarily located within the existing active commuter rail ROW and would be beneficial to communities, it anticipates that the FTA will issue a Finding of No Significant Impact (FONSI) at the conclusion of the NEPA process.

### Project Changes Since Filing of the DEIR

The project has been modified since the review of the DEIR in response to the Certificate on the DEIR and associated comment letters. The most notable project change is the relocation of the proposed Maintenance Facility from the Yard 8 parcel to the Option L parcel, located in the Inner Belt section of Somerville. Another significant modification includes refinements to the

conceptual design and layout of the proposed Lechmere Station in Cambridge. Additional selected noise and vibration data were collected to support additional design modifications near Lechmere Station and the Maintenance Facility. These changes were presented and discussed in the FEIR in an effort to disclose the overall potential environmental impacts associated with the project. These changes have not substantively changed the overall project impacts, and have reduced impacts in some categories.

## **REVIEW OF THE FEIR**

### General

The FEIR included a summary of the proposed project, project background, and addressed changes to the project and public participation efforts undertaken or initiated since the filing of the DEIR. The FEIR provided a discussion of the scope items and included supporting data or graphics as necessary to supplement responses to the Certificate on the DEIR. The FEIR provided a discussion of project-related mitigation measures and contained draft Section 61 findings for use by State permitting agencies.

In accordance with the Certificate on the DEIR, the FEIR included responses to comments to the extent that comments were within MEPA jurisdiction and did not enlarge the Scope of the FEIR beyond what has been expressly identified in the Certificate. The document was circulated in accordance with Section 11.16 of the MEPA regulations and the scope for the FEIR.

### Stormwater

I note concerns raised by MassDEP, the MWRA, and businesses within the project corridor regarding the future management of stormwater runoff generated by the project (in particular, but not limited to, the Maintenance Facility). Given the complicated network of aged infrastructure in the vicinity of the Maintenance Facility, potential discharges to waterbodies with established Total Maximum Daily Load (TMDL) requirements, flows to combined sewer overflow (CSO) facilities, and challenges associated with managing stormwater discharges within a railway corridor, MassDOT, upon advancement of design, should provide stormwater management calculations and design plans for affirmation by MassDEP and the MWRA that compliance with Massachusetts Stormwater Standards, U.S. EPA NPDES permit obligations, and best management practices (BMPs) have been met.

### Community Path

MassDOT has committed to 100-percent design of the Community Path from Lowell Street to the Inner Belt neighborhood of Somerville as part of the final design of the Green Line Extension. MassDOT has designed the Green Line Extension not to preclude construction of the Community Path upon receipt of funding, and has designed and will construct bridges and retaining walls along the future path route (to Inner Belt) to accommodate the needs of the Community Path. MassDOT has also committed identifying any needed property acquisition related to the construction of the Community Path, and will perform any necessary federal-level environmental impact review for the Community Path.



I have received numerous comments on the FEIR expressing support for extending the Community Path all the way to a connection with NorthPoint in Cambridge, and requesting that MassDOT fund and construct the Community Path in its entirety concurrently with the Green Line Extension project. It is my understanding that MassDOT cannot, at this time, commit to funding the additional design or construction costs of the Community Path. Although I recognize the desire of project stakeholders to see the Community Path completed in coordination with the construction of the Green Line project, it is beyond the scope of my authority under MEPA to require MassDOT to assume these additional funding obligations. However, I expect that MassDOT will continue its efforts to support the project as much as possible. In finalizing project design plans, MassDOT should consider future path connections to NorthPoint, and ensure that the final design does not preclude these future connections. I strongly encourage MassDOT to continue to work with the City of Somerville and advocates for the Community path to identify sufficient funding for the ultimate construction of the Path.

### Maintenance Facility

The FEIR included a quantitative environmental analysis of the three potential Maintenance Facility locations: Yard 8; Option L; and Mirror H. This analysis, entitled *Environmental Analysis of Additional Maintenance Facilities*, dated April 2010, responded to the directives of the Certificate on the DEIR. This quantitative environmental analysis was presented to provide additional environmental impact information beyond that presented in the qualitative December 2009 *Additional Maintenance Facility Alternatives Analysis*, prepared by MassDOT. The FEIR provided additional comprehensive analysis of Maintenance Facility siting and operations on: land uses (including EJ populations), impervious area, parking, stormwater, hazardous materials, traffic, land acquisition, noise, vibration, air quality, open space, historic and archaeological resources, the Community Path, and construction period impacts. Furthermore the FEIR described the operational plan, impacts to existing railroad operations, real estate impacts, and order-of-magnitude capital costs for each alternative.

In brief, the three alternatives explored can be summarized as follows:

- Yard 8 is an existing railroad yard adjacent to the proposed Green Line alignment and accessed from inner Belt Road in Somerville. The yard is partially owned by the MBTA and Pan Am Railways. The area is proximate to the Brickbottom Artists Building;
- Option L is located immediately adjacent to and northwest of the MBTA's commuter rail maintenance facility (the Boston Engine Terminal, or BET). Option L is situated along the southern and southeastern fringe of the existing Inner Belt industrial area of Somerville and adjacent to the Valley Tracks just north of the MBTA's BET. A portion of Option L is presently occupied by two commercial/industrial buildings; and
- Mirror H straddles portions of the North Point site (which includes portions of Cambridge, Somerville, and Boston) and a portion of MBTA land. Mirror H is located at the north side of the proposed North Point development and partly on MBTA land south of the BET, and places new light rail facilities next to existing MBTA commuter rail facilities.



The FEIR described potential environmental impacts for each alternative based upon a specific building program for the proposed Maintenance Facility. This building program was determined pursuant to consultation with the MBTA. The Maintenance Facility program includes, but is not limited to: storage for 80 Green Line vehicles, two pit tracks, two lift tracks, one wheel truer track, support shops, Green Line vehicle wash, administrative office space, and an approximately 100-space employee parking lot. The FEIR concluded that after evaluation and balancing all operational and environmental benefits and impacts of the three facility alternatives, combined with discussions with stakeholders, MassDOT selected Option L as the preferred Maintenance Facility site for the Green Line Extension project.

The preferred alternative of Option L includes two storage yards and the maintenance building. Order of Magnitude conceptual capital cost estimates indicate that Option L will cost approximately \$129 million in 2008 dollars, the costliest of the three alternatives. The maintenance building and associated trackwork are proposed on land adjacent to and northwest of the existing BET facility and is currently occupied by two businesses at 20 Third Avenue and 44-48 Third Avenue. The vehicle storage yard is proposed at the southern end of Inner Belt Road just north of the MBTA Fitchburg Line on vacant private property and land that is currently an unused parking lot for 70 Inner Belt Road. Approximately 10.2-acres of land will need to be acquired to accommodate use of Option L for the Maintenance Facility. Storage of cars will occur in three general locations, 40 cars within the south yard, 27 cars within the east yard, and 13 cars stored in the building or tracks just outside the buildings at any given time. This alternative can accommodate potential future air rights development.

Option L has two lead tracks (Medford Lead and Union Square Lead) that provide direct access into and out of the storage yards and maintenance facility. Option L will impact Pan Am Railways' freight operations, requiring the removal of the Wiley Track that connects the south end of Yard 8 to the Valley Tracks. There is no impact to CSX freight rail operations under Option L. The FEIR indicates that alternative routes exist within the MBTA system to support Pan Am Railways' operations and existing overall freight rail operations into the Boston area would not be precluded. Pan Am Railways has indicated in its comment letter on the FEIR that it actively supports the project as outlined in the FEIR. Option L will not preclude the future North-South Rail Link project.

Option L has similar noise impacts (prior to mitigation) to those in the Yard 8 option, with potential moderate impact to two buildings (NorthPoint Properties Tango and Sierra) and potential severe impact to three existing buildings (Brickbottom Artists Building, Hampton Inn Hotel, and the Glass Factory Condominiums) and two future buildings (22 Water Street and Archstone-Smith Development – Phase II, Site1). Vibration impacts associated with a Maintenance Facility at the Option L site will be the same as those modeled under a Yard 8 scenario. No additional noise or vibration mitigation measures are necessary to mitigate the Maintenance Facility itself under the Option L scenario. Option L is not anticipated to have a measurable impact to parking or traffic operations. Option L, due to the acquisition of land and buildings, will reduce property tax revenue for the City of Somerville and will result in the loss or displacement of jobs affiliated with the existing buildings slated for acquisition. As with all property acquisitions associated with the project, they will be guided by the terms of the Federal Uniform Relocation Act.

The FEIR discussed strategies used during the conceptual design phase to limit the Maintenance Facility's footprint in light of the program requirements for facility operations. As directed in the Certificate on the DEIR, the FEIR provided additional detail on possible approaches to minimizing the land acquisitions necessary for the maintenance facility including: consolidating employee parking, shifting MBTA commuter rail system operations out of the Cobble Hill area, and splitting the maintenance and storage operations. Subsequent to additional evaluation, the FEIR concluded that implementing the aforementioned approaches would not substantially reduce land acquisitions or would be incompatible with project goals. I note MassDOT's acknowledgement that during Preliminary Engineering the exact size of the lot required for rail operational needs will be re-evaluated. MassDOT should evaluate the utility of leftover "sliver" parcels not required for the Maintenance Facility to determine if they may be of value as an "add-on" to an adjacent parcel, or for landscaping and screening buffers to adjacent private parcels. The FEIR also directly responded to suggestions for refinements to the Option L site received during the DEIR public comment period. The FEIR discussed why the option, referred to as Mirror L, was determined to be infeasible based on review with MBTA operations.

Many comment letters express support for the relocation of the Maintenance Facility from Yard 8 to the Option L site. However, a common theme of comment letters included requests for additional refinement of the Option L as project design advances. Evaluation of consolidated or dedicated Green Line Extension maintenance operations at the BET facility were conducted satisfactorily in the DEIR phase of review. As design of the Maintenance Facility advances, MassDOT should consider the concerns and suggestions presented in the FEIR comment letters including striving to further reduce the facility's footprint to limit land takings, not precluding future air-rights development and a bridge connection between Inner Belt and NorthPoint, and refining track configuration and idling locations in the Brickbottom area.

### Air Quality

The FEIR stated that the Federal Clean Air Act (CAA) strives to ensure that transportation projects improve air quality. The FEIR also indicated that modeling and review criteria for air quality analyses prepared pursuant to the Federal CAA, Transportation Conformity, and the SIP are defined via guidance from the U.S. EPA and MassDEP. The FEIR restated that the updated air quality analysis in the DEIR showed that the emission reductions calculated in the CTPS 2009 State Implementation Plan Evaluation, which includes the proposed project and other transit projects, exceed the reduction emissions established by the U.S. EPA for Massachusetts transit projects (the 2008 Federal Register *SIP Approved Projects Plus Ten Percent Package*). The FEIR noted that emission reductions were calculated following the same modeling protocol and procedures required for all Transportation Conformity and SIP air quality analyses.

The FEIR discussed in layman's terms the types of input data associated with development of the air quality model, general modeling assumptions, and challenges associated with updating modeling programs and input data. Statewide traffic models used for SIP submissions are required by the U.S. EPA to be based upon the most recent approved planning-level data. Therefore, statewide models are periodically updated to reflect new data, model enhancements, etc. Inputs into this model prepared by CTPS are constantly updated so that the model set



simulates current travel patterns with as much accuracy as possible. A challenge of the project's air quality modeling and ensuring consistency with the SIP commitments is that the statewide traffic model has been updated during interim review of the project. Each modeling effort reflects a snapshot in time of the most informative transportation network and input data available at the time the model is run.

According to MassDEP, the Transit System Improvement regulation, 310 CMR 7.36, was effective on December 1, 2006, upon publication of the Massachusetts Register, and was approved by the U.S. EPA on July 31, 2008 as a revision to the SIP (the 2008 Federal Register *SIP Approved Projects Plus Ten Percent Package*). Subsection (8) of the regulation required MassDOT to demonstrate that the Green Line extension, along with other projects required by the regulation, would meet the "baseline air quality emission reductions", using the "latest planning assumptions and latest air quality emission models." MassDEP determined that MassDOT met the requirements of 310 CMR 7.36(8) on June 1, 2007.

The FEIR states that the air quality modeling presented in the DEIR used an improved traffic model with an updated roadway network, more current land use data, and a newer version of U.S. EPA's mobile source emissions factor model (MOBILE 6.2) when compared to the traffic model of 2006 that was used to establish the 2008 SIP revision package emissions criteria (the 2008 Federal Register *SIP Approved Projects Plus Ten Percent Package*).

The FEIR concluded that the improved modeling dynamic, the most recent of which was performed by CTPS in 2009 (the State Implementation Plan Evaluation), resulted in improved accuracy of the present day and future air quality estimates. This most updated 2009 air quality analysis evaluated the air quality benefits in 2025 of the Green Line Extension to College Avenue with Union Square Spur in combination with the proposed Fairmount Line improvements and additional MBTA parking. As a result of this improved modeling accuracy, while projects have changed or been substituted in the approved SIP package over time, air quality benefits in the year 2025 for carbon monoxide (CO), nitrogen oxides (NOx) and volatile organic compounds (VOCs) are greater than the *SIP Approved Projects Plus Ten Percent Package* presented in the 2008 Federal Register Notice.

Comments I have received from MassDEP on the FEIR indicate that MassDEP considers the FEIR to be responsive to the scope provided in my Certificate on the Draft EIR by providing a more concise narrative of the modeling methodology and assumptions used in the air quality analysis. Significantly, MassDEP also believes that the information presented in the FEIR demonstrates that the proposed project will meet the air quality emission reduction requirements of 310 CMR 7.36. Based upon my review of the air quality modeling information provided in the DEIR, the FEIR and based upon the comments from MassDEP, I have concluded that the project has sufficiently demonstrated air quality benefits to meet the requirements of the SIP and of MEPA.

### *Medford Hillside*

I note ongoing commentary disputing that the project complies with the approved SIP package due to opinions that the project does not meet the criteria set forth in 310 CMR



7.36(2)(j)(1) to construct the “Green Line Extension from Lechmere Station to Medford Hillside”. While I acknowledge differing points of view regarding the reference to Medford Hillside in the SIP regulations, MassDEP has concluded that the project, as proposed in this FEIR will meet the air quality emission reduction requirements of 310 CMR 7.36. Given the status of the SIP as a MassDEP air quality regulation, I must defer to MassDEP’s assessment that the project described in the FEIR is sufficient for compliance with 310 CMR 7.36(2)(j)(1). I find that the information provided by MassDOT and MassDEP concerning compliance with the SIP is sufficient for the purposes of MEPA and to ensure that the project adequately avoids, minimizes and mitigates Damage to the Environment.

#### *Anticipated Schedule for Project Completion*

As noted previously, the Green Line Extension project is a requirement SIP and fulfills a longstanding Commonwealth commitment to increase public transit in the greater Boston area. The Massachusetts Air Pollution Control Regulations (310 CMR 7.36), which implement the SIP, require that MassDOT complete the project by December 31, 2014. I note that on July 9, 2010, MassDOT submitted its State Implementation Plan – Transit Commitments 2010 Status Report to MassDEP. In this report, MassDOT currently estimates that the Green Line Extension project can be ready for in-service start-up by October 2015. While I acknowledge the comments I have received requesting that mitigation for this project completion delay be reviewed in the MEPA process, I note that the Air Pollution Control Regulations themselves set forth the process for identifying air quality offsets that are required as a result of project delays. Pursuant to this process, MassDOT will submit a petition to delay the project that will meet the requirements of 310 CMR 7.36(4) including a proposal for the interim offset project. The review process includes opportunity for public review and comment on the proposed interim offset project(s) and petition. I therefore expect that these offsets will be adequately identified and reviewed by MassDEP and the public through that regulatory process, rather than through MEPA review. I encourage MassDOT nonetheless to consider comments received on the FEIR that address potential offset projects while preparing this petition.

#### College Avenue Station

College Avenue Station will be the terminal station for the first phase of the Green Line Extension, and will transition into an intermediate station during Phase II of the project (the future extension to Mystic Valley Parkway/Route 16). Daily ridership at this station is anticipated to be 2,420 boardings (projected to the year 2030). While College Avenue was evaluated in the DEIR as a terminal station, comments received on the DEIR expressed concern or confusion about the environmental impacts of the station functioning in this manner. The FEIR endeavored to clarify and confirm anticipated impacts associated with College Avenue Station operating as a terminus. The FEIR described: Green Line operations at the station and how the facility has been designed to accommodate terminal station modeled ridership demand; discussed potential station impacts to traffic, parking, pedestrian, and bicycle operations within the study area; clarified how train operations may impact sensitive noise and vibration receptors; and identified mitigation measures to offset identified negative impacts. The FEIR included a memorandum prepared by CTPS discussing the College Avenue Station walk market area.

The FEIR contained a station description and discussion of access and circulation in the vicinity of the station. The FEIR noted that no changes to the traffic model or analysis have occurred since the DEIR was published. In the DEIR, the traffic model assumed that Green Line service terminated at College Avenue Station, and thus there will be approximately 320 additional boardings per day at this station than when it operates as an intermediate station (upon completion of Phase II of the Extension). The model states that approximately 90 percent of these additional trips will be by pedestrians. Vehicular drop-off/pick-up trips are assigned to each station based on the expected total boardings of that station, determined from 2007 CTPS survey data related to urban core stations. MassDOT concluded that the proposed College Avenue Station layout, as presented in the DEIR, and again in the FEIR, was designed to adequately accommodate the additional daily boardings.

Since the traffic analysis in the DEIR specifically evaluated the College Avenue Station as a terminal station, no new mitigation was presented in the FEIR with regard to traffic operations, pedestrian or bicycle accommodations, parking, or bus transportation. The Proponent should continue to work with stakeholders (e.g., residents, the City of Medford, Tufts University) during the advancement of design of the College Avenue Station to best implement mitigation measures to meet anticipated offsets of project-related negative impacts. Particular topics for discussion should be informed by the comments on the FEIR, including but not limited to: kiss and ride facilities, station-area parking enforcement, and the potential conflict between station pedestrian access and institutional property.

The FEIR discussed the potential noise and vibration impacts associated with the proposed College Avenue Station, similar to that presented in the DEIR, as this document evaluated noise and vibration impacts along the project corridor, including those associated with College Avenue Station functioning as a terminal station. The FEIR concluded that new noise sources are minor and do not cause potential impacts and are less significant than noise generated by the existing commuter trains. Potential vibration sources include a crossover on the Green Line tail track north of College Avenue Station when it operates as a terminal station. Another crossover south of College Avenue is also proposed, and required regardless of whether College Avenue Station is a terminal station or an intermediate station. It is my understanding that noise and vibration measurements and modeling considered all types of traffic along the corridor (commuter rail, Amtrak, and freight) when conducting modeling exercises. Noise and vibration mitigation measures in the vicinity of the College Avenue Station are proposed to mitigate impacts of Green Line operations along the corridor; no specific additional measures are necessary to uniquely address College Avenue Station functioning as a terminal station beyond those already proposed for the project. As indicated later in this Certificate, a series of mitigation commitments have been proposed to ensure compliance with noise and vibration standards set forth by the FTA; these include addressing anticipated noise and vibration impacts in the College Avenue area.

### Lechmere Station

The project requires the relocation of the existing Lechmere Station in Cambridge and its transformation from the northern terminus for Green Line operations to an intermediate station for both the Medford and Union Square branches of the Green Line Extension. Furthermore, Lechmere Station functions as a critical transfer point for Green Line light rail and MBTA bus



routes. As part of the Certificate on the DEIR I requested that MassDOT continue to explore ways to better integrate the design and function of the relocated Lechmere Station into the East Cambridge neighborhood.

In response, the FEIR included a description and discussion of Lechmere Station layout modifications. The revised layout includes a reduction in station parking from 234 (as shown in the DEIR) to approximately 180 parking spaces, provided in two separate lots, and would replace some of the 347 spaces currently provided at the existing Lechmere Station. The FEIR included the results of a parking demand analysis that consisted of the collection of origin-destination data (a license plate survey) and an evaluation of projected parking demand and supply. The FEIR also presented a modified layout that: further separates bus operations from vehicular and pedestrian movements, locates the bus layover further away from the Glass Factory Condominiums, improves station layout to facilitate access from two sides, provides a wider crosswalk across O'Brien Highway, and the includes dedicated bicycle lanes within the station area. These conceptual design components will be explored further in the next phase of project design and development and in conjunction with the PIP. The City of Cambridge, community groups such as the East Cambridge Planning Team (ECPT), and individual commenters have made thoughtful recommendations regarding advanced design aspects of the station that I encourage MassDOT to consider during the design and PIP process.

The FEIR included a discussion of alternative station layouts investigated, but subsequently dismissed, in an effort to shift the station and tracks further away from the Glass Factory Condominiums and/or improve the functionality of the station. Scenarios evaluated included shifting the tracks, relocating the headhouse to the south side of the station site, and providing two separate headhouses. Of particular note is that the potential modifications to push the elevated track structure further to the east away from the Glass Factory Condominiums would require the use of curves that could impact train operations, could create additional noise impacts, and would significantly impact the permitted North Point development plans for this area.

The FEIR discussed modified access and circulation in the vicinity of the relocated Lechmere Station based on the revised station layout. The FEIR provided an updated traffic operations, pedestrian and bicycle access, and parking needs analysis based on reevaluated assumptions associated with station layout changes. The FEIR described general station access, traffic operations (both in an "Interim Condition" reflecting a pre-NorthPoint construction scenario (2014) and a "Future Build Condition" (2030) reflecting the final construction and implementation of the full NorthPoint development program). While the FEIR presents a proposed station layout that would include all the Lechmere Station elements within MBTA property limits, once NorthPoint is constructed, the station's internal circulation roadways will be modified, where appropriate, to match the plan approved by the City of Cambridge's special permit for NorthPoint. The design presented in the FEIR will not preclude future NorthPoint buildings or roadways from being constructed as permitted.

The notable difference in traffic circulation between the time Lechmere Station is constructed and the full construction of NorthPoint is access to and from Water Street. In the Interim Condition, buses, existing Water Street traffic, and traffic related to the 22 Water Street development will be permitted to turn left until the time that NorthPoint is complete. In the final



condition, no left-turns will be allowed out from Water Street. As the reconstruction of O'Brien Highway from Third Street to East Street will be completed prior to the opening of the relocated Lechmere Station, general travel patterns in the East Cambridge neighborhood and access to the station headhouse, as well as pedestrian and bicycle access, will not change between the Interim Condition and the Future Build Condition.

The FEIR contained a full examination of pedestrian trip patterns to address concerns related to pedestrian crossings across O'Brien Highway. The analysis used data from 2008 Green Line passenger surveys to determine how riders who walk or park at Lechmere Station access the site. New crosswalks along O'Brien Highway and at Cambridge Street and First Street will be designed to provide pedestrian crossing times that comply with applicable Federal and State requirements and design guidelines. In this portion of the roadway network, proposed traffic signal plans have been established to manage vehicle queuing and progression rather than vehicle delay. The proposed configuration, with new crossings and split phase signal operation for First Street and North First Street will increase protection for pedestrians crossing between Lechmere Station and East Cambridge. The FEIR states that "overlapping" pedestrian phases will have the result of effectively providing for a full crossing for the majority of pedestrian movements without having to lengthen phases unnecessarily. Furthermore, to accommodate pedestrians who cannot cross in a single movement, or those pedestrians who initiate crossing too late in a pedestrian phase, a minimum 20-foot wide center median has been recommended. The operations of signalized pedestrian crossings, including identification of the exact width and length of crosswalks and refinements to signal timing and phasing will be refined during the preliminary engineering process.

It is my understanding that the City of Cambridge is conducting a feasibility study of the transformation of the present Lechmere Station site into a year-round public market. In response to both the DEIR and FEIR, I have received comments requesting that the proposed right-turn lane from O'Brien Highway to North First Street be eliminated from the project, as it will require the demolition of the existing 'bus barn' at Lechmere Station. While not requested in the scope on the FEIR, MassDOT prepared an analysis of potentially reducing the number of travel lanes along O'Brien Highway near Lechmere Station. This analysis considered 2030 projected future traffic volumes *without* traffic related to the future NorthPoint development. Design challenges associated with this portion of the road cross-section include providing space for dedicated bicycle lanes and an appropriately sized median, and establishing travel lanes that meet acceptable levels of service in the design horizon year of 2030. Based upon the information provided in the FEIR, this proposed traffic mitigation measure (i.e., a right-turn lane from O'Brien Highway southbound to North First Street) is necessary to meet project design mitigation requirements. I note that the City of Cambridge has concluded that it does not appear feasible to preserve the bus barn and still meet the design and mitigation goals along O'Brien Highway. However, I encourage MassDOT to consider the results of the public market feasibility study when designing pedestrian and bicycle access between Lechmere Station and the surrounding neighborhood.

The FEIR analyzed changes to impacts to abutting land uses, specifically noise and vibration impacts, based upon modifications to the station layout. All other environmental impacts related to the station have not changed since the DEIR. Potential noise and vibration impacts were assessed, based upon methodologies defined in the FTA Guidance Manual *Transit*

*Noise and Vibration Impact Assessment* at sensitive receptors near Lechmere Station. These sensitive receptors include: a residential development planned at 22 Water Street, the Hampton Inn Hotel, the Glass Factory Condominiums, NorthPoint development properties, and two planned Archstone residential buildings. The FEIR compared existing noise and vibration conditions to future noise and vibration sources associated with the mainline Green Line operations, maintenance facility noise sources, and the bus operations at Lechmere Station. The noise assessment concluded that a total of two properties (NorthPoint Tango and Sierra) may be exposed to moderate noise impact and four properties (proposed 22 Water Street, Hampton Inn Hotel, the Glass Factory Condominiums, and the proposed Archstone Phase II Site 1 building) may be exposed to severe noise impact prior to mitigation. Proposed noise mitigation associated with the relocation of Lechmere Station includes the construction of approximately 450 feet of barriers on the northeast edge of the elevated guideway and in between the inbound and outbound tracks, as well the use of ballast masts or resilient rail fasteners on inbound and outbound tracks along this stretch of the tracks. The vibration assessment concluded that the proposed Lechmere Station would not result in vibration impact to the identified receptors. In light of comments received on the FEIR, MassDOT should continue to work with impacted properties to ensure that the FTA Guidelines for noise and vibration mitigation will be met.

### Public Involvement Plan

I appreciate MassDOT's efforts to establish a robust program for public participation during the design and construction of a major transit expansion project. The FEIR contained a PIP that will be implemented by MassDOT and the MBTA to continue efforts of public outreach through the design, engineering, and construction of the Green Line Extension. The PIP was prepared subsequent to consultation with corridor municipalities, community groups, stakeholders, comments received during the MEPA review process, and upon review of existing public outreach efforts associated with the project. This plan, as noted by MassDOT, should be updated periodically to assess successes and/or challenges of plan implementation and modified accordingly to achieve effective outreach.

The FEIR stated the four principal goals of the project's PIP as:

- To provide an interactive, collaborative, and credible public process;
- To equip the design team with ideas and recommendations from the public that would inform the design of the Green Line Extension;
- To solicit input from local residents and businesses, local and regional government agencies and interest groups; and
- To provide methods to keep residents, business owners and municipal officials informed about construction, its potential impacts and schedule, and to lessen those impacts as much as possible.

The FEIR provided a review of previous public involvement efforts and lessons learned from these efforts. The FEIR also included a general summary of the primary topics MassDOT anticipates seeking public comment on during the PIP. These topics were generally categorized as: design, land use, operations and maintenance, final design, construction impacts and testing, and the Community Path. I acknowledge that certain topics, including those related to building



and operating the transit system safely or those elements guided by applicable regulation and established practice, will remain in the purview of MassDOT and the MBTA. The FEIR listed a broad-range of stakeholders and constituencies (including local environmental justice community groups) that MassDOT has been working with, and will continue to work with, throughout implementation of the PIP.

The FEIR identified public outreach strategies that will be utilized by MassDOT and the MBTA to maintain a collaborative relationship with stakeholders and municipalities during design/engineering and construction phases. Generally speaking, as the project proceeds, public outreach will shift from gathering input on project design to information sharing and problem resolution during the construction period. The FEIR described numerous methods for public engagement as part of the PIP including public information meetings; community briefings; meetings and presentations; formation of a Design Working Group (DWG); public design workshops; maintenance of a website; production of project fact sheets and information materials; email notices and communication; media outreach; coordination with ongoing projects; and outreach to environmental justice populations. As applicable, the FEIR identified anticipated frequencies of specific outreach efforts and how information from various efforts will be shared publicly. This PIP has sufficiently outlined how a broad range of participants will continue to have a mechanism to provide meaningful community involvement throughout the duration of the entire project. During the FEIR comment period, I received comments with suggestions of how to potentially improve the PIP. I encourage MassDOT to consider these suggestions as implementation of the PIP commences.

My understanding is that members of the DWG have been charged with advising the MassDOT and MBTA on the planning of the public design workshops, participating in the workshops, sharing project information with their neighborhoods and interested parties, and serving on the corridor advisory group during engineering and construction. It is expected that these members will seek to engage members of the community in the public process, act as a bridge between citizens (and their interests/concerns) and MassDOT, and gather 'neighborhood-level' guidance to inform the design process. The DWG, along with the use of public meetings and other components to the PIP, will facilitate a broad public outreach effort to all the interest groups identified in the Certificate on the DEIR. I encourage MassDOT to strive to provide background information and meeting agendas in advance of public design workshops and DWG quarterly meetings to achieve a productive participation process. Furthermore, to facilitate effective meetings, a representative from the MBTA well-versed in system operations and facilities design policies should be present at meetings to answer questions and provide guidance to the DWG to prevent unnecessary delays or allocation of resources to exploring design ideas that do not meet MBTA operating standards. Representation by the MBTA at these meetings will assist in the anticipated transition of the project from MassDOT to the MBTA. Finally, while some ideas shared at design workshops may be constrained by technical or economic feasibility, I encourage MassDOT to clarify how public input received at workshops will be taken into consideration in the decision making process and communicate this information at public meetings held in accordance with the PIP.

The PIP provided information on public outreach efforts specific to the challenges of the construction period. In general, MassDOT and the MBTA have committed to strategies that will:



inform the public of construction plans; provide regular updates on construction, traffic detours and other impacts; and solve problems that arise during construction. The project's construction contractor will be required to commit to a spectrum of outreach activities and efforts to mitigate the impacts of construction. Notable components of these outreach efforts include the transition of the DWG into the Construction Working Group (CWG), which will review issues associated with construction and advise MassDOT and MBTA on solving construction-related problems. I expect that the structure of how the DWG facilitates public participation will be replicated once the CWG is established. The PIP also includes, but is not limited to, a commitment to develop a business outreach plan to assist local businesses during construction, preparation of quarterly construction updates, and the appointment of a Green Line Extension project Ombudsman to field all construction-period comments and complaints, coordinate with the cities, and respond to public concerns.

### Mitigation / Draft Section 61 Findings

The FEIR contained draft Section 61 findings associated with each separate State Agency Action identified for the project. These draft Section 61 findings should be revised in response to this Certificate and provided to State agencies to assist in the permitting process and issuance of Final Section 61 findings.

Mitigation decisions will be made on both a corridor-wide basis (i.e., construction of sound walls) and an individual property basis (when there are impacts to be mitigated). Through the PIP process MassDOT has indicated that they will outline avoidance or mitigation policies, construction mitigation, and mitigation for long-term operation of the system to the extent possible. Strategies that may be implemented include vehicular, bicycle and pedestrian mitigation, traffic mitigation, and construction management and detour plans. Design documents will detail how MassDOT will evaluate, monitor, and compensate affected parties along the corridor with respect to noise and vibration and other impacts. Part of the PIP includes presentations to the public of plans to mitigate noise and vibration, with adherence to existing standards (in accordance with the FTA guidance) to serve as the goal. The FEIR noted that specific mitigation elements that are subject to FTA regulations and guidelines include noise, vibration, and land acquisition (which is governed by the Uniform Relocation Act). The FEIR states that the MBTA will monitor noise and vibration after service starts to determine future noise levels generated by the Green Line Extension and the relocated commuter rail. If noise levels are found to be higher than the modeled projections, the MBTA will investigate the cause and take appropriate corrective action (i.e., installation of additional noise or vibration mitigation measures within the right-of-way or offering the homeowner additional sound insulation, etc.). In response to the comment letters I have received concerning these issues, I ask that MassDOT continue to work closely with interested parties as design advances about specific mitigation measures. MassDOT should be forthcoming with its mitigation plans as early as feasible and should be responsive to ongoing public input on this topic.

The FEIR noted that temporary, short-term impacts from construction activities will be mitigated to the extent feasible. Appropriate construction mitigation measures (as outlined below) will be incorporated into the contract documents and specifications governing the activities of contractors and subcontractors constructing elements of the Project. Prior to construction, MassDOT will prepare a detailed plan to address various construction period impacts through

coordination with cities and appropriate emergency personnel. This plan will seek to avoid, minimize and mitigate potential impacts to vehicular traffic, pedestrian and bicycle traffic, on-street parking, public access, emergency access to local businesses and residences, dust, noise, odor, rodents and construction-related nuisance conditions. MassDOT will work with contractors to establish construction protocols. On-site resident engineers and inspectors will monitor all construction activities to ensure that mitigation measures are properly implemented.

The FEIR contained both a narrative description of proposed mitigation measures, as well as a summary table that identified measures, an implementation schedule, preliminary cost estimate and responsible party. For reference, an additional narrative discussion of proposed mitigation measures is included in Section 8.3 of the FEIR. Project mitigation commitments and construction period mitigation commitments were summarized in Table 8-6 and Table 8-7, respectively, in the FEIR. These tables have been reproduced below as a means of memorializing these mitigation measures in this Certificate:



FEIR Table 8-6 Project Mitigation Commitments

Human and Environmental Resources	Mitigation Measure	Implementation Schedule	Cost Estimate	Implementation Responsibility
<b>Traffic</b>	Provide roadway and signal modifications at ten specific intersections in order to prevent adverse traffic impacts from the Project. Revisit opportunities to reduce vehicular traffic associated with the addition of new stations during design.	Completion of construction <sup>1</sup>	\$10 M	MassDOT/MBTA
	Provide pedestrian improvements at 33 specific locations to improve pedestrian flow and safety.	Completion of construction <sup>1</sup>	\$800,000	MassDOT/MBTA
	Work with cities to develop station-area parking enforcement plans.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Work with the MBTA to evaluate opportunities to improve connections between the new stations and existing bus connections.	Prior to/Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Work with cities and applicable emergency personnel during design of intersection mitigation measures, as well as establishment of construction management and detour plans.	Prior to/Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
<b>Noise</b>	Provide noise mitigation in the form of noise barriers or sound insulation to mitigate severe noise impacts. Provide noise mitigation for moderate noise impact where existing noise levels are above 65 Ldn. Provide noise mitigation for impacts with no significant outdoor land use if interior day-night sound levels (Ldn) are above 45 dBA from Project sources or single-event maximum noise levels (Lmax) above 65 dBA.	Completion of construction <sup>1</sup>	\$2.7 M (noise barriers), costs for sound insulation or noise barriers to be determined in next phase	MassDOT/MBTA
<b>Vibration</b>	Provide vibration mitigation in the form of ballast mats or resilient rail fasteners and relocated or specially-engineered special track to mitigate vibration impacts.	Completion of construction <sup>1</sup>	\$3.5 M (mats), \$5.9 M (fasteners)	MassDOT/MBTA
<b>Hazardous Materials</b>	Consult with MassDEP during design and commencement of construction to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
<b>Land Use</b>	Work with the community for the area of the future Mystic Valley/Route 16 to consider land use and station design elements.	Prior to construction	N/A	MassDOT/MBTA
	Complete the final design for the proposed Somerville Community Path between Lowell Street and the Inner Belt area. Work with City of Somerville to identify opportunities for state and Federal funding for construction of Community Path.	Prior to construction	\$2 M	MassDOT/MBTA
<b>Water Quality/Stormwater</b>	Prepare a Stormwater Pollution Prevention Plan (SWPPP).	Prior to construction	N/A	MassDOT/MBTA
	Install detention and infiltration systems to infiltrate peak runoff and to prevent any increase in peak flows to municipal stormwater drainage systems and to remove TSS from stormwater runoff prior to discharge.	During construction <sup>2</sup>	\$455,000	MassDOT/MBTA
	Install hydrodynamic particle separators to treat pavement runoff.	During construction <sup>2</sup>	\$255,000	MassDOT/MBTA
	Install Low Impact Development practices, where	Completion of	TBD	MassDOT/MBTA



	feasible, to maintain natural hydrology (e.g., raingardens to treat disconnected roof drainage and/or parking runoff).	construction <sup>1</sup>		
	Update the Operation and Maintenance (O&M) plan in the SWPPP to include a detailed outline of inspection and cleaning schedules for stormwater management practices, including detention areas and deep sump catch basins.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Implement all aspects of the SWPPP including recommendations in annual updates based on new or improved procedures or changes to operations.	Post-construction	N/A	MassDOT/MBTA
<b>Visual Environment</b>	Provide vegetation on and/or above retaining walls to minimize visual changes.	Completion of construction <sup>1</sup>	TBD	MassDOT/MBTA
	Work with affected communities on design of noise barriers and vegetated walls.	Prior to construction	N/A	MassDOT/MBTA
<b>Historical and Cultural Resources</b>	Perform archival documentation of historic structures to be removed or altered.	Prior to demolition	\$30,000	MassDOT/MBTA
	Construct noise barriers with materials and colors compatible with adjacent historic properties.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Provide noise mitigation (sound insulation) for sensitive historic structures that cannot be protected using noise barriers.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Perform intensive archaeological survey before disturbing any archaeologically-sensitive areas.	Prior to construction	\$50,000	MassDOT/MBTA
<b>Public Involvement</b>	Continue civic engagement opportunities during the design process. Provide transparent public information and outreach process once construction commences.	Completion of construction <sup>1</sup>	N/A	MassDOT/MBTA
	Engage interested parties in a station Design Working Group.	Prior to construction	N/A	MassDOT/MBTA
	Conduct land use workshops with affected communities to further identify community needs and issues near the proposed station areas.	Prior to construction	N/A	MassDOT/MBTA
<b>Design</b>	As design advances, facilitate future transit projects such as light rail expansion or connections to existing infrastructure to the extent possible.	Prior to construction	N/A	MassDOT/MBTA
	Include "green" design component (recycled or recyclable materials or incorporate vegetation) in design of proposed retaining walls.	Prior to construction	N/A	MassDOT/MBTA
	During design, refine Project designs to further minimize temporary and permanent impacts on local neighborhoods and property owners.	Prior to construction	N/A	MassDOT/MBTA
	Design all stations in compliance with ADA standards, Massachusetts AAB standards; MBTA's settlement agreement with the Boston Center for Independent Living; applicable National Fire Protection Association standards.	Prior to construction	N/A	MassDOT/MBTA

<sup>1</sup> Completion of construction (12/31/2014)

<sup>2</sup> During construction (11/11/2011 – 12/31/2014)

TBD = To be determined during final design

N/A = Cost not applicable for this item

FEIR Table 8-7 Summary of Construction Mitigation Measures

Environmental Categories	Mitigation Measure	Implementation Schedule	Implementation Responsibility
Traffic	Temporary detours would be established to minimize traffic disruption due to construction.	During construction <sup>1</sup>	MassDOT/MBTA
	Bridge reconstruction would be timed so as to minimize temporary bridge closures and to ensure that adjacent bridges were not closed simultaneously.	Completion of construction <sup>2</sup>	MassDOT/MBTA
Noise	Use specially quieted equipment with enclosed engines and/or high-performance mufflers.	During construction <sup>1</sup>	MassDOT/MBTA
	Avoid nighttime construction in residential neighborhoods.	During construction <sup>1</sup>	MassDOT/MBTA
	Keep truck idling to a minimum.	During construction <sup>1</sup>	MassDOT/MBTA
	Route construction equipment and vehicles through areas that would cause the least disturbance to nearby receptors where possible.	During construction <sup>1</sup>	MassDOT/MBTA
	Fit any air-powered equipment with pneumatic exhaust silencers.	Prior to construction	MassDOT/MBTA
	Locate stationary construction equipment as far as possible from noise-sensitive sites.	During construction <sup>1</sup>	MassDOT/MBTA
	Construct noise barriers, such as temporary walls or piles of excavated material, between noisy activities and noise-sensitive receivers.	Prior to construction	MassDOT/MBTA
Vibration	Avoid nighttime construction in residential neighborhoods.	During construction <sup>1</sup>	MassDOT/MBTA
	Use alternative construction methods to minimize the use of impact and vibratory equipment (e.g. pile drivers and compactors).	During construction <sup>1</sup>	MassDOT/MBTA
Water Quality/ Stormwater	Develop and implement a SWPPP in accordance with NPDES and MassDEP standards.	Prior to construction	MassDOT/MBTA
	Stabilize any highly erosive soils with erosion control blankets and other stabilization methods, as necessary.	During construction <sup>1</sup>	MassDOT/MBTA
	Reinforce slopes using a hydroseed mix with a resin base, native vegetation, or other approved methods.	During construction <sup>1</sup>	MassDOT/MBTA
	Use dewatering controls, if necessary.	During construction <sup>1</sup>	MassDOT/MBTA
	Install a gravel entrance to prevent sediment from being tracked onto roadways and potentially discharged to surface waters.	During construction <sup>1</sup>	MassDOT/MBTA
	Maintain construction equipment to prevent oil and fuel leaks.	During construction <sup>1</sup>	MassDOT/MBTA
Air Quality	Apply water to dry soil to prevent dust production.	During construction <sup>1</sup>	MassDOT/MBTA
	Use water for compaction in the fill areas and as a dust retardant in both the soil cut areas and haul roads.	During construction <sup>1</sup>	MassDOT/MBTA
	Follow existing MassDEP's Solid Waste and Air Quality Control regulations and MBTA retrofit procedures for construction equipment to reduce emissions.	During construction <sup>1</sup>	MassDOT/MBTA
	Comply with MassDEP's idling regulations. Post idling restriction signage on Project construction sites.	During construction <sup>1</sup>	MassDOT/MBTA

1 During construction (11/11/2011 – 12/31/2014)

2 Completion of construction (12/31/2014)

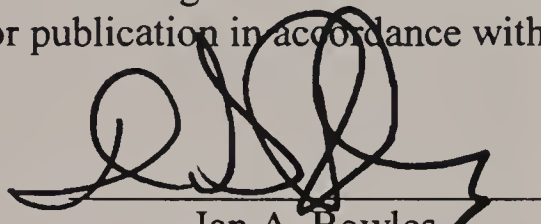


Conclusion

Based on a review of the FEIR, comment letters and consultation with state agencies, I find that the FEIR adequately and properly complies with MEPA and its implementing regulations. Outstanding issues can be addressed during state and local permitting and review. The project may proceed to permitting. The Proponent and the State Agencies should forward copies of the final Section 61 Findings to the MEPA Office for publication in accordance with 301 CMR 11.12.

July 30, 2010

Date



Ian A. Bowles

IAB/HSJ/hsj

Comments received:

06/23/2010	James C. Simpson
06/26/2010	James Martin
06/30/2010	Stephen Paul Linder
07/02/2010	Eric Colburn
07/06/2010	Ken Westhassel
07/09/2010	Bathsheba Grossman
07/09/2010	Susanna Barry
07/11/2010	Joyce Tavon
07/12/2010	Jeff Reese
07/12/2010	Lenore Hill and Keith Glover
07/12/2010	Rigel Patterson
07/12/2010	Linda Lintz
07/12/2010	Tyrone Yang
07/13/2010	Caitriona Cooke
07/13/2010	East Arlington Livable Streets Coalition
07/14/2010	Susan Piver Browne
07/14/2010	Stuart and Lana Camiel
07/15/2010	Abby Luthin
07/15/2010	Judith Scribner-Moore
07/15/2010	Thouis Jones
07/15/2010	Imran Khan
07/16/2010	Natasha Burger
07/16/2010	Ulandt Kim
07/16/2010	Felipe Regan
07/16/2010	April Evans
07/16/2010	Sherry Autor
07/16/2010	Polly K. Pook
07/16/2010	Linda M. Goulet



07/16/2010	Debra Olin
07/16/2010	Julia Shepley
07/16/2010	Samuel Lobel
07/16/2010	Pauline Lim
07/16/2010	Ramon Bueno
07/16/2010	Timothy Poisson
07/16/2010	Alan and Paula Brody
07/16/2010	Matthew Fallon
07/16/2010	Mini Ann Polumbaum
07/16/2010	Irene Valivueis
07/16/2010	William S. Turville
07/16/2010	Max Fine
07/16/2010	C. Garrett
07/16/2010	Norman Fine
07/16/2010	Tom Devlin
07/17/2010	Michael Bernstein
07/17/2010	Lisa Hodson
07/17/2010	Federico
07/17/2010	Bob Berger
07/17/2010	Ben Johnson
07/17/2010	Ariyen Weissman
07/17/2010	Zackary Weissman-Bennett
07/17/2010	Zack Perman
07/17/2010	Craig Murphy / Cambridge Repro-Graphics
07/17/2010	Maura Gould
07/17/2010	Joel Bennett
07/17/2010	MaryAnn Wells
07/17/2010	Lynne Baer
07/17/2010	Tracey Kaplan
07/17/2010	Susan Moynihan
07/17/2010	Gavin Schnitzler
07/17/2010	Brooke Cowan
07/17/2010	Andrew Petrone
07/17/2010	Nathaniel Brooks
07/17/2010	Ariel B. Harms
07/17/2010	Erin Artin
07/17/2010	Patrick King
07/17/2010	Ruth Alfasso
07/17/2010	Mares Beeman
07/17/2010	Darlene Matthews
07/17/2010	Laura Feldman
07/17/2010	Julie Bloch
07/17/2010	David Buckley
07/17/2010	Seth Opitz
07/17/2010	Seenivasan Alagarsamy
07/17/2010	Robert Orynich

07/17/2010	Maegan Lillis
07/17/2010	Amanda Max
07/17/2010	Jeremy Fisher
07/17/2010	Ilya Lozovsky
07/17/2010	Frances Fisher
07/17/2010	Alison Moore
07/17/2010	R. Edwards
07/17/2010	David Matheu
07/17/2010	Christa Beranek
07/17/2010	Lynn Gervens
07/17/2010	Richard Freierman
07/17/2010	Allyson Goose
07/17/2010	Ellen Gallagher
07/17/2010	Beth Meserve
07/17/2010	Tonya Salerno
07/17/2010	Brian Matthews
07/17/2010	Catherine Barber
07/17/2010	Shawn Morrissey
07/17/2010	Jennifer Bliss
07/17/2010	J. Brandon Wilson Evitt
07/17/2010	Margery Meadow & John Macleod
07/17/2010	Lee-Anne J King
07/17/2010	Brittany Peats
07/17/2010	Liza Kitchell
07/17/2010	Jeffrey Keller
07/17/2010	Tom Riechele
07/17/2010	Brian Tamm
07/17/2010	Lucy Nunn
07/17/2010	Daniel Wolf
07/17/2010	Dana Allen Walsh
07/17/2010	Sean Walsh
07/17/2010	Martin Vaspan
07/17/2010	Natalie Cox
07/17/2010	Sharon Beiti
07/17/2010	Pete Olszowka
07/17/2010	Sean Doocy
07/17/2010	Adina Davidson
07/17/2010	Abigail Murray
07/17/2010	Jonathan Soloman
07/17/2010	Irene Abrams
07/17/2010	Anna Rawska
07/17/2010	Myra Durkin
07/17/2010	Frances Rogers
07/17/2010	Christopher Schmidt
07/17/2010	Ben Schwalb
07/17/2010	Mollie Tucker

07/17/2010	Daniel Singer
07/17/2010	Jill Singer
07/17/2010	Rosa Bento
07/17/2010	David Lees
07/17/2010	Alex Pitkin
07/17/2010	Turil Cronburg
07/17/2010	Douglas Seely
07/17/2010	Matt Marjanovic
07/17/2010	Allison Carter
07/17/2010	David Salat
07/17/2010	Mary Christy
07/17/2010	Daniel Wallace
07/17/2010	Matthew Rice
07/17/2010	Kelly Lynema
07/17/2010	Leah Tenney & Eamon Keating
07/17/2010	Wendy Blom
07/17/2010	Ram Kelath
07/17/2010	Corey Johnson
07/17/2010	Luke Grymek
07/17/2010	Vaughn Simkins
07/17/2010	Charles Tesch
07/17/2010	Kelly Burke
07/17/2010	Philip Budne
07/17/2010	Marla Rhodes
07/17/2010	Karl Thidemann
07/17/2010	Todd Kaplan
07/17/2010	Alex Helsinger
07/17/2010	Stacey Doniger
07/17/2010	Eric Friedrich
07/17/2010	Sharon Kivenco
07/17/2010	Susan Carter
07/17/2010	Kyann Anderson
07/17/2010	Steven Brown
07/17/2010	Matt Malinowski
07/17/2010	Marianna Papageorge
07/17/2010	Tim Mueller
07/17/2010	Franz Hover
07/17/2010	Jonathan Winideoff
07/17/2010	Max Garfunkel
07/17/2010	Kevin Leppmann
07/17/2010	Cecile Guzman
07/17/2010	Peter Galeno
07/17/2010	Laura Brewer
07/17/2010	John Reinhardt
07/17/2010	Allison Stagg
07/17/2010	Philip Wells



07/17/2010	Tim Neunzig
07/17/2010	Elizabeth Brewer
07/17/2010	Isaura Vergucht
07/17/2010	Frank Martin
07/17/2010	Philip Anderson
07/17/2010	Andrew Brown
07/17/2010	Robert Breznak
07/17/2010	Gayln Traub
07/17/2010	Maureen Boyle
07/17/2010	Jared Clemens
07/17/2010	Andrew Moore
07/17/2010	Janet Mendelsohn
07/17/2010	Rahul Bhargava
07/17/2010	Sundar Nagarajan
07/17/2010	Garrett Avery
07/17/2010	David Welch
07/17/2010	Naomi Slagowski
07/17/2010	Irine Rasputnis
07/17/2010	Judy Wong
07/17/2010	Elisabeth Fine
07/17/2010	William Herron
07/17/2010	Diane Andronica
07/17/2010	Laura Liston
07/17/2010	Laurie Gutierrez
07/17/2010	Jonathan Mitchell
07/17/2010	2 illegible signatures
07/18/2010	Joshua Smift
07/18/2010	Stephn Linder
07/18/2010	K. Tracy Munn
07/18/2010	Juan Bulnes-Fowles
07/18/2010	David Cameron
07/18/2010	Chris Page
07/18/2010	Sarah Bergstrom
07/18/2010	Melissa Butler Bennett
07/18/2010	David Phillips
07/18/2010	Amy Smift
07/18/2010	Fran Altvater
07/18/2010	Peter Houk
07/18/2010	Maria Daniels
07/18/2010	Leigh Meunier
07/18/2010	Willa Bandler
07/19/2010	David H. Douglas
07/19/2010	William Gilligan
07/19/2010	Yvette Verdieu
07/19/2010	Josiah Lee Auspitz
07/19/2010	Tami Kaplan

07/19/2010	Melissa Glenn Haber
07/19/2010	Richard Kaufman
07/19/2010	Markie McBrayer
07/19/2010	Charlie Denison
07/19/2010	Daniel Fairchild
07/19/2010	Skip Schiel
07/20/2010	Jeffrey R. Levine
07/20/2010	Jessica Davis
07/20/2010	Gavin R. Schnitzler
07/20/2010	Matthew Sachs
07/20/2010	Alice Grossman
07/20/2010	Richard J. Barbalace
07/20/2010	Alan Greene
07/20/2010	Cynthia Pellegrini
07/20/2010	Chris Mesarch
07/20/2010	Jennifer Lawrence
07/20/2010	David C. Osler
07/20/2010	Timur Kaya Yontar
07/20/2010	Sonia Lipson
07/20/2010	Steven Orzack
07/20/2010	Charles Russo
07/21/2010	Mary R. Jeka, Vice President for University Relations, Tufts University
07/21/2010	Resident – Winter Street
07/21/2010	Alden Zecha
07/21/2010	Bonnie Borthwick
07/21/2010	David Sholl
07/21/2010	W. Scott Cooledge
07/21/2010	Jill Slosberg-Ackerman
07/21/2010	Adelaide Smith
07/21/2010	William Kipp
07/21/2010	Cheryl Bakey
07/21/2010	Margery Hamlen
07/21/2010	Connie Blaszczyk
07/21/2010	Deborah Davidson
07/21/2010	Laura Beretsky
07/21/2010	Steve Gottlieb
07/21/2010	Lynn Weissman
07/21/2010	Belmont Citizens Forum
07/21/2010	Judith Weinstock
07/21/2010	Roberta Cameron
07/21/2010	Jeremiah Huson
07/21/2010	Henry Milorin
07/21/2010	Priscilla Chew
07/21/2010	Karolina Wrobel
07/21/2010	Kay Canavino
07/21/2010	Craig Murphy

07/21/2010	Kamal Ayad
07/21/2010	Karen Gardner
07/21/2010	Steven and Julie Roix
07/21/2010	Jennifer DesAutels
07/22/2010	Alex Feldman
07/22/2010	Michael Dwyer
07/22/2010	Adrienne Landau
07/22/2010	Fred Berman and Lori Segall
07/22/2010	Arnold Reinhold
07/22/2010	Marco Rivero
07/22/2010	Alex Epstein
07/22/2010	Leslie Fincke
07/22/2010	Laurie Krieger
07/22/2010	Mary Anne Adduci
07/22/2010	Thomas W. Lincoln
07/22/2010	Barbara Steiner
07/22/2010	Vincent Mase
07/22/2010	Debra Weisberg
07/22/2010	Sandy Schafer and Bernard LaCasse
07/22/2010	A. Raymond Bourque
07/22/2010	Lois Bennett
07/22/2010	M. Susanna Darling
07/22/2010	Jacinthe Gingras
07/22/2010	Jessica Strauss
07/22/2010	Elissa W. Katler
07/22/2010	Damien DiBona
07/22/2010	Thomas Gardon and Karen Holtzman
07/22/2010	Green Line Advisory Group for Medford (GLAM)
07/22/2010	Dr. William Wood
07/22/2010	Allison Goldsberry
07/22/2010	Paula Woolley
07/22/2010	Mark Jaquith
07/22/2010	Alan Moore
07/22/2010	Stephen Pomeroy
07/22/2010	Melissa O'Shea
07/22/2010	Anthony O'Shea
07/22/2010	Lori Gardinier
07/22/2010	Jared Ingersoll
07/22/2010	Margaret Weigel
07/22/2010	William Messenger
07/22/2010	Stephanie Geuns-Meyer
07/22/2010	Marc Davidson
07/22/2010	Naomi Slagowski (2 <sup>nd</sup> comment)
07/22/2010	Heather Stockwell
07/22/2010	Massachusetts Department of Environmental Protection – Boston
07/22/2010	Massachusetts Department of Environmental Protection - NERO



07/22/2010 Barbara Broussard  
 07/22/2010 John M. Connolly, Alderman at Large, President, Somerville Board of Aldermen  
 07/22/2010 State Representative Denise Provost, 27<sup>th</sup> Middlesex District  
 07/22/2010 Metropolitan Area Planning Council  
 07/22/2010 Friends of the Community Path  
 07/22/2010 WalkBoston  
 07/22/2010 M.S. Walker Company  
 07/23/2010 United States Congressmen Michael Capuano, 8<sup>th</sup> District Massachusetts  
 07/23/2010 Professional Services Corporation, PC, on behalf of Brickbottom Condominium Trust  
 07/23/2010 Inner Belt Industrial Center Realty Trust and the Somerville Chamber of Commerce's Inner Belt Business Interest Group  
 07/23/2010 Robert W. Healy, City Manager, City of Cambridge  
 07/23/2010 Conservation Law Foundation  
 07/23/2010 Sierra Club, Massachusetts Chapter  
 07/23/2010 Robert G. Martel, Property Manager, Brickbottom Condominium Trust  
 07/23/2010 Trustees of the Brickbottom Condominium Trust  
 07/23/2010 MBTA Rider Oversight Committee  
 07/23/2010 City of Medford – Office of Human Diversity and Compliance  
 07/23/2010 Michael J. McGlynn, Mayor, City of Medford  
 07/23/2010 Lauren DiLorenzo, Director, City of Medford Office of Community Development  
 07/23/2010 Clodagh Stoker-Long, Economic Development Planner, City of Medford Office of Community Development  
 07/23/2010 Cassandra Koutalidis, City Engineer, City of Medford Department of Public Works  
 07/23/2010 Paul F. Mochi, Building Commissioner, City of Medford  
 07/23/2010 Karen L. Rose, Director, Medford Board of Health and Council on Aging  
 07/23/2010 Carey R. Duques, Director, City of Medford Energy and Environment Office  
 07/23/2010 Monica R. Lamboy, Executive Director, City of Somerville Office of Strategic Planning and Community Development  
 07/23/2010 Joseph A. Curtatone, Mayor, City of Somerville  
 07/23/2010 State Senator Patricia Jehlen, 2<sup>nd</sup> Middlesex District  
 07/23/2010 PanAm Railways  
 07/23/2010 Lisa Brukilacchio, Director of Somerville Community Health Agenda Cambridge Health Agenda  
 07/23/2010 State Representative Timothy J. Toomey, Jr., 26<sup>th</sup> Middlesex District  
 07/23/2010 Mystic River Watershed Association  
 07/23/2010 Jeffrey L. Roelofs, P.C., on behalf of Brickbottom Condominium Trust  
 07/23/2010 Massachusetts Bicycle Coalition (MassBike)  
 07/23/2010 Massachusetts Department of Conservation and Recreation  
 07/23/2010 Mass Central Rail Trail Coalition  
 07/23/2010 State Representative Carl M. Sciortino, Jr., 34<sup>th</sup> Middlesex District  
 07/23/2010 East Somerville Main Streets  
 07/23/2010 Livable Streets Alliance  
 07/23/2010 Somerville Chamber of Commerce  
 07/23/2010 Stephen R. Gaun  
 07/23/2010 Pat Stevens

07/23/2010	John Mann and Ellen Chase
07/23/2010	Mike Korcynski
07/23/2010	Randall Thurston
07/23/2010	Lisa DiMatteo
07/23/2010	Michael Adamian
07/23/2010	Susan Strauss
07/23/2010	Erik and Dina Jacobs
07/23/2010	Charles Marquardt
07/23/2010	Laurel Ruma
07/23/2010	Lynn Sahaida
07/23/2010	Joseph S. Lynch and James W. Widor
07/23/2010	Michael Bernstein (2 <sup>nd</sup> comment)
07/23/2010	Mary Regan
07/23/2010	Mark Chase
07/23/2010	Bruce Kulik
07/23/2010	Sarah Shugars
07/23/2010	Steve Mulder
07/23/2010	Heather Maguire Hoffman
07/23/2010	Christopher Park
07/23/2010	David Dahlbacka
07/23/2010	Sean Hooley
07/23/2010	Friends of the Bruce Freeman Rail Trail
07/23/2010	Lynn McWhood
07/23/2010	Caroline Kipp
07/23/2010	William Bennett
07/23/2010	Sarah Bapst
07/23/2010	Kris Kipp
07/23/2010	Patricia Lyga and Kay Canavino
07/23/2010	Linda Fisher
07/23/2010	P. Panda
07/23/2010	George Gabin
07/23/2010	L. Gordon
07/23/2010	Heather Van Aelst
07/23/2010	Jonathan McDowell
07/23/2010	Lana Hermann
07/23/2010	Diane Novetsky
07/23/2010	Lois Fiore
07/23/2010	Brian, Rebecca and Augustin Didier
07/23/2010	Ellen Band
07/23/2010	Peter John Marquez
07/23/2010	Sean Sullivan
07/23/2010	David F.
07/23/2010	Ann Gallagher
07/23/2010	Andrea Yakovakis
07/23/2010	Stephanie Greenish
07/23/2010	Sharon Beets

07/23/2010	Wilson Cardona
07/23/2010	Alana Thurston
07/23/2010	Jean Lamisere
07/23/2010	Xavier Orellana
07/23/2010	Jonathan Reis
07/23/2010	Jules Stevens
07/23/2010	Rome Thermidor
07/23/2010	Nadier Ducasse
07/23/2010	Ryan Kennedy-Williams
07/23/2010	Darron Fernandes-Smith
07/23/2010	Joseph Baldesde
07/23/2010	Claudy Jean-Louis
07/23/2010	Bryant Parsons
07/23/2010	Gelrick Phanor
07/23/2010	Marc Verhagen
07/23/2010	Donna Laquidara-Carr
07/23/2010	Wig Zamore
07/23/2010	Chris Matthews
07/23/2010	Suzanne Lipksy
07/23/2010	Alyson Schultz
07/23/2010	Ellin Reisner
07/23/2010	Marguerite Scott
07/23/2010	Stephen H. Kaiser
07/23/2010	Cecily Harwitt
07/23/2010	John Roland Elliott
07/23/2010	Kenneth J. Krause
07/23/2010	Elisabeth Bayle
07/23/2010	Stephen Paul Linder (2 <sup>nd</sup> comment)
07/23/2010	Walter Willett
07/23/2010	Karen Molloy
07/23/2010	Kevin Dufresne
07/23/2010	Jim McGinnis
07/23/2010	Paul Morrissey, Aero Cycle Co.
07/23/2010	Alan Moore (2 <sup>nd</sup> comment)
07/23/2010	Kathleen Tevenan
07/23/2010	Martha Stone
07/23/2010	Courtney O'Keefe
07/23/2010	Lisa Gimbel
07/23/2010	Doug Carr
07/23/2010	Linda Carrubba
07/23/2010	Charlie Smigelski
07/23/2010	David Alexander
07/23/2010	Lucy Chen
07/23/2010	Michael Silverman
07/23/2010	Dan Tremitiere
07/23/2010	Rob Kassel



07/23/2010 Joseph P. Lynch, Jr, Magoun Square Neighborhood Association  
07/23/2010 Richard Briton  
07/23/2010 unsigned comment letter

## Late Comments:

07/24/2010 Elizabeth Golubitsky  
07/24/2010 Ami Almendral Feldman  
07/25/2010 Wig Zamore (2<sup>nd</sup> comment)  
07/26/2010 Massachusetts Water Resources Authority  
07/26/2010 Pamela Su  
07/26/2010 David Tonnesen  
07/26/2010 Mimi Ann Polumbaum (2<sup>nd</sup> comment)  
07/26/2010 George Summers, Jr.  
07/26/2010 Gregory Atkinson  
07/26/2010 Eytan Fichman  
07/27/2010 Ellen Young



### **3. Previously-reviewed Proposed Build Condition**







# GREEN LINE EXTENSION PROJECT

Previously Reviewed Project | Cambridge, Somerville, Medford, MA

- MBTA Blue Line
- MBTA Green Line
- MBTA Orange Line
- MBTA Red Line
- MBTA Silver Line
- MBTA Commuter Rail
- Proposed Station
- Existing Station
- MBTA Parking Lot
- Green Line Proposed Action
- Proposed Maintenance Facility

Moving Massachusetts Forward  
**massDOT GLX**

Source: MassGIS

0 0.25 0.5 1 Miles







#### **4. Currently Proposed Build Condition**





# GREEN LINE EXTENSION PROJECT

Currently Proposed Project | Cambridge, Somerville, Medford, MA

- MBTA Blue Line
- MBTA Green Line
- MBTA Orange Line
- MBTA Red Line
- MBTA Silver Line
- MBTA Commuter Rail
- Proposed Station
- Green Line Proposed Action
- Existing Station
- Proposed Maintenance Facility
- MBTA Parking Lot

Moving Massachusetts Forward  
**massDOT GLX**

Source: MassGIS

0 0.25 0.5 1 Miles



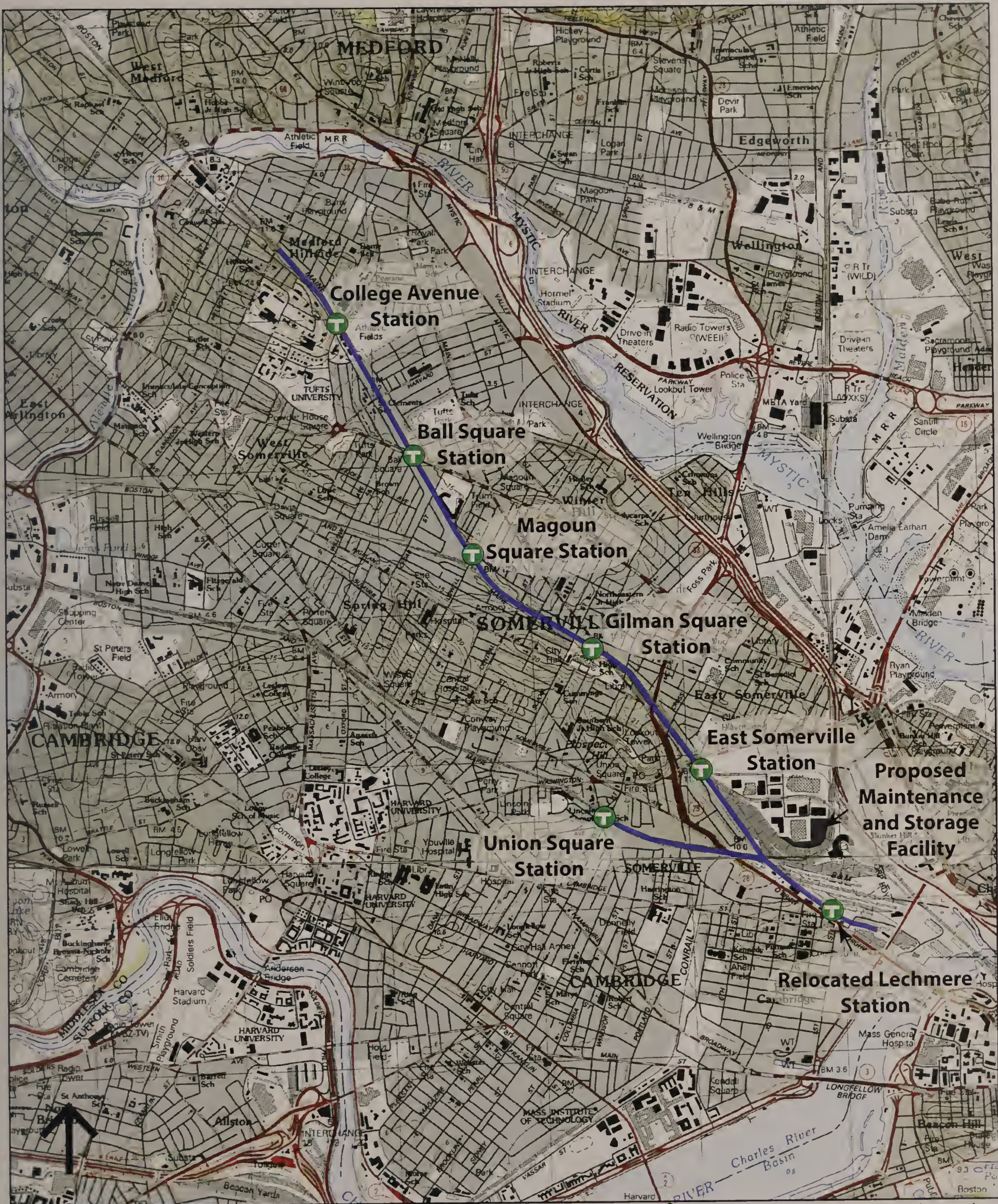




## **5. Project Location and Boundaries**







Source: Office of Geographic and Environmental Information (MassGIS) Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs





## **6. Notice of Project Change Circulation List**





**Green Line Extension Project  
Notice of Project Change  
Distribution List**

In accordance with Section 11.10 (7) of the Massachusetts Environmental Policy Act (MEPA) regulations at 301 CMR 11.00, this Notice of Project Change is being distributed to the following governmental agencies and other parties via an email notification that the Notice of Project Change is available on the Project website <http://greenlineextension.eot.state.ma.us/>. Copies of the document are also made available at the listed libraries. To request a copy of the document, please contact Lois Baxter at (617) 222-3124 or at [lbaxter@mbta.com](mailto:lbaxter@mbta.com)

**Federal Agencies and Elected Officials**

Senator Elizabeth Warren  
2400 JFK Federal Building  
15 New Sudbury Street  
Boston, MA 02203

Senator Edward Markey  
975 JFK Federal Building  
15 Newbury Street  
Boston, MA 02203

Senator Edward Markey  
975 JFK Federal Building  
15 New Sudbury Street  
Boston, MA 02203

Representative Michael Capuano  
Attn: Jonathan Lenicheck  
110 First Street  
Cambridge, MA 02141

Representative Katherine Clark  
701 Concord Avenue, Suite 101  
Cambridge, MA 02138

Federal Transit Administration, Region 1  
Attn: Mary Beth Mello  
Regional Administrator  
55 Broadway, Suite 920  
Cambridge, MA 02142-1093

Federal Transit Administration, Region 1  
Attn: Peter Butler  
Deputy Regional Administrator  
55 Broadway, Suite 920  
Cambridge, MA 02142-1093

**State and Regional Agencies and Elected Officials**

Senator Patricia Jehlen  
State House, Room 424  
Boston, MA 02133

Senator Joseph Boncore  
State House, Room 109D  
Boston, MA 02133

Senator Sal DiDomenico  
State House, Room 208  
Boston, MA 02133

Representative David Rogers  
State House, Room 472  
Boston, MA 02133

Representative Marjorie Decker  
State House, Room 155  
Boston, MA 02133

Representative Mike Connolly  
State House, Room 437  
Boston, MA 02133

Representative Jonathan Hecht  
State House, Room 22  
Boston, MA 02133

Representative Jay Livingstone  
State House, Room 136  
Boston, MA 02133

Representative Sean Garballey  
State House, State House, Room 134  
Boston, MA 02133

Representative Paul J. Donato  
State House, Room 481  
Boston, MA 02133

Representative Denise Provost  
State House, Room 473B  
Boston, MA 02133

Representative Christine Barber  
State House, Room 236  
Boston, MA 02133

Representative Byron Rushing  
State House, Room 121  
Boston, MA 02133

Department of Conservation and Recreation  
251 Causeway Street, Suite 600  
Boston, MA 02114

Department of Environmental Protection  
Commissioner's Office  
One Winter Street  
Boston, MA 02108

Department of Environmental Protection  
Northeast Regional Office  
205B Lowell Street  
Wilmington, MA 01887

Department of Environmental Protection  
Air Quality Program  
One Winter Street  
Boston, MA 02108

Massachusetts Department of Transportation  
District Highway Director – District 4  
519 Appleton Street  
Arlington, MA 02476

Massachusetts Department of Transportation  
Attn: MEPA Coordinator  
10 Park Plaza, Suite 3170  
Boston, MA 02116

Massachusetts Historical Commission  
The Massachusetts Archive Building  
Attn: Brona Simon, Executive Director  
220 Morrissey Boulevard  
Boston, MA 02125

Massachusetts Water Resources Authority  
Program Manager, Regulatory Compliance  
Charlestown Nave Yard  
100 First Avenue, Building 39  
Boston, MA 02129

Boston Region Metropolitan Planning  
Organization c/o Central Transportation  
Planning Staff  
10 Park Plaza  
Room 2150  
Boston, MA 02116

Metropolitan Area Planning Council  
60 Temple Place, 6th Floor  
Boston, MA 02111

### **Municipalities**

#### ***Somerville***

Joseph Curtatone, Mayor  
Office of the Mayor  
Somerville City Hall  
93 Highland Ave.  
Somerville, MA 02144

William A. White, Jr.  
Alderman at Large, President  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143



Katjana Ballantyne  
Vice President  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

John M. Connolly  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Dennis M. Sullivan  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Mary Jo Rossetti  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Matthew McLaughlin  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Maryann M. Heuston  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Robert J. McWatters  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Tony Lafuente  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Mark Niedergang  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Lance Davis  
Somerville Board of Aldermen  
93 Highland Ave.  
Somerville, MA 02143

Somerville Board of Health  
Attn: Health Department Director  
City Hall Annex  
50 Evergreen Avenue  
Somerville, MA 01245

Somerville Bicycle Committee  
City Hall  
93 Highland Avenue  
Somerville, MA 02143

Somerville City Clerk  
93 Highland Avenue  
Somerville, MA 02143

Somerville Conservation Commission  
93 Highland Avenue  
Somerville, MA 02143

Somerville Office of Strategic Planning  
and Community Development  
Attn: Brad Rawson  
93 Highland Avenue  
Somerville, MA 02143

Somerville Department of Public Works  
1 Franey Rd.  
Somerville, MA 02143

### ***Cambridge***

E. Denise Simmons  
Mayor  
City Hall  
795 Massachusetts Avenue  
Cambridge, MA 02139

Marc C. McGovern  
Vice Mayor  
City Hall  
795 Massachusetts Avenue  
Cambridge, MA 02139

Dennis J. Carlone  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

Lelund Cheung  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

Jan Deveraux  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

Craig Kelley  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

David P. Maher  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

Nadeem A. Mazen  
Cambridge City Council  
795 Massachusetts Avenue, 2nd Floor  
Cambridge, MA 02139

Timothy J. Toomey  
Cambridge City Council  
795 Massachusetts Avenue, 2<sup>nd</sup> Floor  
Cambridge, MA 02139

Louis DePasquale  
City Manager  
Cambridge City Hall  
795 Massachusetts Avenue  
Cambridge, MA 02139

Cambridge City Clerk  
City Hall  
795 Massachusetts Avenue  
Cambridge, MA 02139  
Attn: Donna P. Lopez

Cambridge Traffic, Parking &  
Transportation Department  
Attn: Joseph E. Barr  
344 Broadway  
Cambridge, MA 02139

Cambridge Community Development  
Department  
Attn: Susanne Rasmussen  
344 Broadway  
Cambridge, MA 02139

Cambridge Historical Commission  
Attn: Charles M. Sullivan  
Lombardi Building  
831 Massachusetts Ave., 2nd Floor  
Cambridge, MA 02139

Cambridge Conservation Commission  
344 Broadway  
Cambridge, MA 02139

Cambridge Health Department  
119 Windsor Street, Ground Floor  
Cambridge, MA 02139

### ***Medford***

Stephanie M. Burke, Mayor  
City of Medford  
Medford City Hall  
85 George Hassett Dr.  
Medford, MA 02155

Richard Caraviello  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

Michael J. Marks  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

Frederick N. Dello Russo, Jr.  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

Adam Knight  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

Breanna Lungo-Koehn  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

George A Scarpelli  
Medford City Councilor  
Medford City Hall  
85 George P. Hassett Drive, Room 207  
Medford, MA 02155

Medford City Clerk  
85 George Hassett Dr.  
Medford, MA 02155

Medford Energy and Environment  
Office  
85 George Hassett Dr.  
Medford, MA 02155

Medford Office of Veterans' Services  
85 George Hassett Dr.  
Medford, MA 02155

Medford Department of Public Works  
85 George Hassett Dr.  
Medford, MA 02155

Medford Office of Community  
Development  
Attn: Lauren DiLorenzo, Director  
85 George Hassett Dr.  
Medford, MA 02155

Medford Building Department  
85 George Hassett Dr.  
Medford, MA 02155

Medford Conservation Commission  
85 George Hassett Dr.  
Medford, MA 02155

Medford Board of Health and Council  
on Aging  
101 Riverside Avenue  
Medford, MA 02155

Medford Office of Human Diversity and  
Compliance  
Medford City Hall,  
85 George P. Hassett Drive, Room 214  
Medford, MA 02155

Medford Fire Department  
120 Main Street  
Medford, MA 02155

Medford Police Department  
100 Main St  
Medford, MA 02155

### ***Boston***

Boston Environmental Department  
One City Hall Square  
Room 805  
Boston, MA 02201

Boston Transportation Department  
Boston City Hall  
Room 721  
Boston, MA 02201

Boston Planning & Development  
Agency  
One City Hall, Ninth Floor  
Boston, Massachusetts 02201



## **Public Libraries**

The State Library of Massachusetts  
Government Documents Department  
State House, Room 341  
Boston, MA 02133

City of Somerville  
Public Library, Central Branch  
79 Highland Avenue  
Somerville, MA 02143  
Attn: Reference Desk

City of Somerville  
Public Library, East Branch  
115 Broadway  
Somerville, MA 02145  
Attn: Reference Desk

City of Somerville  
Public Library, West Branch  
40 College Avenue  
Somerville, MA 02144  
Attn: Reference Desk

City of Cambridge  
Public Library, Central Branch  
449 Broadway  
Cambridge, MA 02139  
Attn: Reference Desk

City of Cambridge  
Public Library, Boudreau Branch  
245 Concord Avenue  
Cambridge, MA 02138  
Attn: Reference Desk

City of Cambridge  
Public Library, Central Square Branch  
45 Pearl Street  
Cambridge, MA 02139  
Attn: Reference Desk

City of Cambridge  
Public Library, Collins Branch  
64 Aberdeen Avenue  
Cambridge, MA 02138  
Attn: Reference Desk

City of Cambridge  
Public Library, O'Connell Branch  
48 Sixth Street  
Cambridge, MA 02141  
Attn: Reference Desk

City of Cambridge  
Public Library, O'Neill Branch  
70 Rindge Avenue  
Cambridge, MA 02140  
Attn: Reference Desk

City of Medford  
Public Library  
111 High Street  
Medford, MA 02155  
Attn: Reference Desk

Attn: Curator of Government Documents  
City of Boston  
Public Library, Central Branch  
700 Boylston Street  
Boston, MA 02116

## **Community Organizations**

Belmont Citizens Forum  
Brickbottom Artist Building Trust  
Brickbottom Condominium  
Change.org  
Charles River Transportation Management  
Association  
Community Corridor Planning Project  
Conservation Law Foundation  
Davis Square Task Force  
Downtown North Association  
East Cambridge Planning Team  
East Somerville Main Streets  
Friends of the Belmont Community Path  
Friends of the Bruce Freeman Rail Trail  
Friends of the Community Path  
Glass Factory Condo Trust  
Green Line Advisory Group for Medford (GLAM)  
Green Line Community Forum  
Groundwork Somerville  
Institute for Human Centered Design  
Livable Streets Alliance  
Magoun Square Neighborhood Association

Massachusetts Bicycle Coalition (MassBike)  
Mass Central Rail Trail Coalition  
MBTA Rider Oversight Committee  
Medford Neighborhood Green Line Alliance  
(MGNA)  
Mystic River Watershed Association  
Sierra Club  
Somerville Chamber of Commerce  
Somerville Climate Action  
Somerville Community Corporation  
Somerville Community Health Agenda  
Somerville Transportation Equity Partnership  
(STEP)  
The Welcome Project  
Town of Arlington Transportation Advisory  
Committee  
Tufts University  
Union Square Main Streets  
University Place Condo Trust  
Wachusett Greenways  
Walk Boston

### **Businesses**

Aero Cycle Co.  
Arrowstreet Inc.  
ADZ Group  
BioVentures Investors  
Cambridge Repro-Graphics  
Catamount Holdings  
Cummings Foundation, Inc.  
Cummings Properties  
Driscoll Electric  
M.S Walker Company  
Nelson/Nygaard Consulting Associates  
Nilsson Associates  
Pan Am Railways  
South Bay Properties

### **Individuals**

Irene Abrams  
Michael Adamian  
Mary Anne Adducci  
David Adriaansen  
Tania Ahmed

Seenivasan Alagarsamy  
David Alexander  
Ruth Alfasso  
Matthew Alford  
Jeff Altepeter  
Rebecca Altepeter  
Susan Altman  
Fran Altvater  
David Anderson  
KyAnn Anderson  
Terri Anderson  
Philip Anderson  
Diane Andronica  
Tori Antonino  
Amy Appleford  
Chandace Arledge  
Derek Arledge  
Erin Artin  
Gregory Atkinson  
Lee Auspitz  
Josiah Lee Auspitz  
Sherry Autor  
Garrett Avery  
Kamal Ayad  
Lawrence Bacow  
Christopher Bader  
John Baehrend  
Lynne Baer  
Cheryl Bakey  
Jason Baklavas  
Joseph Baldesde  
Ellen Band  
Willa Bandler  
Sarah Bapst,  
Richard J. Barbalace  
Catherine Barber  
Susanna Barry  
Edward Batista, Jr.  
Jenny Bauer

John Bay  
Elisabeth Bayle  
Laurinda Bedingfield  
Mares Beeman  
Sharon Beets  
Sharon Beiti  
Christopher Beland  
James Bennett  
Christine Bennett  
Lois Bennett  
Joel Bennett  
Melissa Butler Bennett  
William Bennett  
Tom Bent  
Rosa Bento  
Christa Beranek  
Laura Beretsky  
Bob Berger  
Roger D. Bergeron,  
Sarah Bergstrom  
Dan Berman  
Fred Berman  
Nancy Bernhard  
Michael Bernstein  
Jane Fair Bestor  
Jack Beusmans  
Rahul Bhargava  
Gwen Blackburn  
Connie Blaszczyk  
Jennifer Bliss  
Julie Bloch  
Wendy Blom  
Ron Bonney  
Walter Booth  
Jose Borges  
Bonnie Borthwick  
A. Raymond Bourque  
Seth Boyd  
Maureen Boyle

Chris Braiotta  
Donna Brallier  
Len Brault  
Laura Brewer  
Elizabeth Brewer  
Robert Breznak  
Chris Briaotta  
Richard Briton  
Alan Brody  
Paula Brody  
Peter Bronk  
Nathaniel Brooks  
Barbara Broussard  
Francis Brown  
Susan Brown  
Steven Brown  
Andrew Brown  
Lisa Brukilacchio,  
John Buckley  
David Buckley  
Philip Budne  
Andres Bueno  
Joelle Bueno  
Ramon Bueno  
Juan Bulnes-Fowles  
Rachel Burckhardt  
Natasha Burger  
Donald Burgess  
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## **7. Draft Section 61 Finding**





MASSACHUSETTS DEPARTMENT OF TRANSPORTATION  
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY  
REVISED DRAFT SECTION 61 FINDING PURSUANT TO  
M.G.L. CHAPTER 30, SECTION 61

PROJECT NAME: Green Line Extension Project

PROJECT LOCATION: Cambridge, Somerville, and Medford, Massachusetts

PROJECT PROPONENT: Massachusetts Department of Transportation  
Massachusetts Bay Transportation Authority

EEA NUMBER: #13886

I. PROJECT DESCRIPTION

The Green Line Extension (GLX) (the Project) would provide new transit service to Union Square in Somerville and to College Avenue in Medford using a two –branch operation, both in existing commuter rail rights-of-way (ROW). The 3.4 mile Medford Branch would operate from a relocated Lechmere Station in Cambridge to College Avenue in Medford along the Lowell Line commuter rail ROW. This branch would begin at relocated Lechmere Station and head northwest, meeting the MBTA Lowell line just south of Washington Street in Somerville. From Washington Street, the alignment would run parallel to the MBTA Lowell line to its terminus at College Avenue in Medford. The 0.9 mile Union Square Branch would operate along the MBTA Fitchburg Line commuter rail ROW from relocated Lechmere station to a terminus at Union Square in Somerville.

The Project includes the relocation of the existing commuter rail tracks, the construction of 4.3 miles of new Green Line tracks and systems, one relocated station (Lechmere) and six new stations (Union Square, College Avenue, Ball Square, Magoun Square, Gilman Square, and East Somerville Stations), and a new vehicle maintenance facility.

The Project would help the Commonwealth of Massachusetts expand transportation services and improve regional air quality.

II. MASSACHUSETTS ENVIRONMENTAL POLICY ACT HISTORY

An Expanded Environmental Notification Form (EENF) for the GLX project was prepared and submitted, pursuant to the Massachusetts Environmental Policy Act (MEPA) (G.L., c. 30, ss. 61-62I) and Sections 11.03 of the MEPA regulations (301 CMR 11.00) to the Executive Office of Environmental Affairs (EOEA) on October 10, 2006. The Secretary of Environmental Affairs issued a Certificate on the EENF on December 1, 2006 requiring the preparation of a Draft Environmental Impact Report (DEIR). The DEIR was prepared and submitted to the Executive

Office of Energy & Environmental Affairs (EEA) on October 15, 2009, responding to the scope of work outlined in the Certificate on the EENF. A Certificate was issued on January 15, 2010, and determined that the DEIR adequately and properly complies with MEPA and its implementing regulations, and that the Proponent may prepare and submit a Final Environmental Impact Report (FEIR). The FEIR was prepared and submitted to EEA on June 15, 2010, responding to the scope of work outlined in the Certificate on the DEIR. A Certificate was issued on July 30, 2010 and determined that the FEIR adequately and properly complies with MEPA and its implementing regulations.

A Notice of Project Change for the GLX was prepared and submitted, pursuant to Sections 11.10 of the MEPA regulations (301 CMR 11.00) to EEA on January 31, 2017. A Certificate was issued on \_\_\_\_\_ and determined that \_\_\_\_\_.

This Section 61 Finding is accordingly based on information disclosed and discussed in the MEPA process. The potential environmental impacts of the Project have been characterized and quantified in the EENF, DEIR, and FEIR, which are incorporated by reference into this Section 61 Finding. Throughout the planning and environmental review process, the Massachusetts Department of Transportation and the Massachusetts Bay Transportation Authority have been working to develop measures to mitigate significant impacts of the proposed action. Project Mitigation and Construction Mitigation measures as listed in Tables 1 and 2 in Section III. The NPC has documented that the changes to the Project do not result in any new or additional impacts that were not fully considered and vetted as part of the GLX MEPA process.



### III. SPECIFIC PROJECT RELATED IMPACTS AND MITIGATION MEASURES

Table 1 PROJECT MITIGATION MEASURES

Traffic and Transportation Systems
<p>Provide roadway and signal modifications at the following specific intersections in order to prevent adverse traffic impacts from the project:</p> <p><u>City of Medford</u></p> <ul style="list-style-type: none"><li>• Boston Avenue at Winthrop Street</li><li>• Boston Avenue at College Avenue</li></ul> <p><u>City of Somerville</u></p> <ul style="list-style-type: none"><li>• Washington Street at McGrath Highway</li><li>• Prospect Street at Somerville Avenue</li><li>• Washington Street at Somerville Avenue/Webster Street</li><li>• Washington Street at Tufts Street</li><li>• Medford Street at Pearl Street</li><li>• Broadway at Boston Avenue/Rogers Avenue</li></ul> <p><u>City of Cambridge</u></p> <ul style="list-style-type: none"><li>• Monsignor O'Brien Highway/Route 28 at Third Street</li><li>• Monsignor O'Brien Highway/Route 28 at Water Street</li><li>• Monsignor O'Brien Highway/Route 28 at North First Street/East Street/Cambridge Street</li><li>• Cambridge Street at First Street</li></ul>
Optimize traffic signal timing and phasing to maximize the efficiency of signalized intersections in the Proposed Action.
Work with cities to develop station-area parking enforcement plans. No public parking proposed at any station
Work with the MBTA to evaluate opportunities to improve connections between the new stations and existing bus connections.
Work with cities and applicable emergency personnel during design of intersection mitigation measures, including the development of construction management and detour plans.

Provide pedestrian improvements at the following specific locations to improve pedestrian flow and safety:

City of Medford

- Boston Avenue at North Street
- Boston Avenue at Winthrop Street
- Boston Avenue between Winthrop Street and College Avenue (mid-block)
- Boston Avenue at Harvard Street

City of Somerville

- Powder House Rotary
- Boston Avenue at Broadway
- College Avenue between Boston Street and Frederick Avenue (mid-block)
- College Avenue at George Street
- Main Street at George Street
- Main Street at Harvard Street
- Medford Street at Broadway
- Main Street at Mystic Valley Parkway Ramps
- Main Street at Mystic Avenue
- Medford Street at Lowell Street
- Medford Street at Central Street
- Medford Street at School Street
- Medford Street at Pearl Street
- Medford Street at Walnut Street
- Medford Street at Highland Avenue
- Highland Avenue at Lowell Street
- Highland Avenue at Central Street
- Washington Street at McGrath Highway
- Washington Street at Tufts Street
- Washington Street at Inner Belt Road
- Medford Street at Somerville Avenue/McGrath Highway
- Washington Street at Somerville Avenue/Prospect Street
- Washington Street at Somerville Avenue/Webster Street
- Washington Street at Kirkland Street
- Prospect Street at Webster Avenue

City of Cambridge

- O'Brien Highway at Third Street
- O'Brien Highway at Water Street
- O'Brien Highway at North First Street
- Cambridge Street at First Street

## Noise

Mitigate noise impacts by providing noise barriers or sound insulation. Provide mitigation for moderate noise impact where existing day-night sound levels (L<sub>dn</sub>) are above 65 dBA. Provide mitigation for impacts with no significant outdoor land use if interior noise levels are above 45 dBA from project sources or single-event maximum noise levels (L<sub>max</sub>) are above 65 dBA. Provide noise barriers at the following locations:

- N1 -Glass Factory Condominiums and Hampton Inn Hotel
- N2 -Brickbottom (Northeast Façade)
- N3 -Brickbottom (South Façade)
- N6 -Between McGrath Highway and Walnut Street (Gilman Street)
- N7 -Between School Street and Sycamore Street (Richdale Avenue)
- N9 -Vernon Street
- N10 -Nashua Street/Henderson Street/Hinckley Street
- N11 -Trum Playground
- N12 -Cedar Street and Wilson Avenue
- N14-Newbern Ave/Morton Ave/Granville Ave
- N15 -Burget Avenue
- N16 -Horace Street
- N17 -Walnut Street Center

Provide sound insulation improvements at the following locations:

- Pearl Street Apartment building
- Powderhouse Condominiums
- Outside the Lines Studio building
- Tufts University Science and Technology Center
- N4 -Alston Street
- N5 -Between Cross Street and McGrath Highway (Avon Place)
- N8 -Sycamore Street near Richdale Avenue (historic Susan Russell house)
- N13 -Between Cedar Street and Broadway (Boston Avenue)

Monitor noise after service starts with the proposed mitigation in place to evaluate whether the actual noise levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.



## Vibration

Provide vibration mitigation at the following locations:

- V1: Glassfactory Condominiums
- V2: Brickbottom Artists Building (Northeast Façade)
- V3: Brickbottom Artists Building (South Façade)
- V4: Alston Street (south of Cross Street)
- V5: Tufts Street/Avon Pl/ Auburn Ave South of Cross to McGrath Highway
- V6: Gilman Street (McGrath Highway to Walnut)
- V7: Medford Street (North of Walnut)
- V8: Pearl Street Apartment
- V9: Richdale Avenue
- V10 -Lowell Street/Nashua Street/Hinckley Street/Berwick Street (Lowell Street to Charles E Ryan Road)
- V11 -Murdock Street (south of Cedar Street)
- V12 -Cedar Street (north of Cedar Street)
- V13 -Newbern Avenue/Morton Avenue/Granville Avenue/Winchester Place/Wareham Street (Broadway to Warren Street)
- V14 -Tufts University Science and Technology Center
- V15 -Tufts Bacon Hall
- V16 -Outside the Lines Artist Studio
- V17 -Tufts Bray Laboratory
- V18 -Tufts Curtis Hall
- V19 -Horace Street

## Hazardous Materials

Consult with MassDEP during design and construction to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.

## Land Use

Work with the community in the area of the future Mystic Valley/Route 16 to consider land use and station design elements.

Complete the final design for the proposed Somerville Community Path between Lowell Street and the Inner Belt area. Work with City of Somerville to identify opportunities for state and Federal funding for construction of Community Path.

## Water Quality/Stormwater

Prepare a Stormwater Pollution Prevention Plan (SWPP)

Install detention and infiltration systems to infiltrate peak runoff and to prevent any increase in peak flows to municipal stormwater drainage systems and to remove TSS from stormwater runoff prior to discharge.

Install hydrodynamic particle separators to treat pavement runoff.

Use Low Impact Development practices, where feasible, to maintain natural hydrology (e.g., raingardens to treat disconnected roof drainage and/or parking runoff).

Update the Operation and Maintenance (O&M) plan in the SWPPP to include a detailed outline of inspection and cleaning schedules for stormwater management practices, including detention areas and deep sump catch basins.
Implement all aspects of the Stormwater Pollution Prevention Plan (SWPP) including recommendations in annual updates based on new or improved procedures or changes to operations.
<b>Visual Environment</b>
Loam and seed on private property where areas are disturbed by wall construction. Compensate for damaged shrubbery.
Walls will meet criteria agreed to with the community.
<b>Cultural Resources and Section 4(f) Resources</b>
Perform archival photographic and written documentation of historic structures to be removed or altered (Lechmere Station/Lechmere Viaduct, Somerville Automobile Company Building)
Submit design plans and construction specifications for project elements that affect above-ground historic properties for review by the Massachusetts Historical Commission (MHC), local historical commissions, and the Design Working Group.
Following MBTA design protocol review, develop interpretative displays of Lechmere Station/Lechmere Viaduct and the Somerville Automobile Company Building, in consultation with the FTA, the MHC and relevant historical commissions.
Implement sound insulation at the historic Susan Russell House in accordance with context-sensitive materials and colors. Submit design plans and construction specifications for review by MHC and the Somerville Historical Commission.
<b>Public Involvement</b>
Continue civic engagement opportunities during the design process. Provide transparent public information and outreach process through construction.
Engage interested parties through the Design Working Group.
Conduct land use workshops with affected communities to further identify community needs and issues near the proposed station areas.
<b>Design</b>
Facilitate future transit/transportation projects such as light rail expansion or connections to existing infrastructure to the extent possible.
Implement a Sustainability Management Plan
During design, refine project designs to further minimize temporary and permanent impacts on local neighborhoods and property owners.
Design all stations in compliance with ADA standards, Massachusetts AAB standards; MBTA's settlement agreement with the Boston Center for Independent Living (BCIL) and applicable National Fire Protection Association standards.



Table 2 Construction Mitigation measures

<b>General</b>
Prior to construction, prepare a detailed plan to address various construction period impacts to various environmental resources (vehicular traffic, pedestrian and bicycle, on-street parking, public access, emergency access to local businesses and residences, dust, noise, odor, rodents, construction-related nuisance conditions) through coordination with cities and appropriate emergency personnel.
<b>Traffic and Transportation Systems</b>
Establish temporary detours to minimize traffic disruptions due to construction.
Stage bridge construction to ensure that adjacent bridges are not closed simultaneously.
Work with cities and applicable emergency personnel to ensure that appropriate safety measures are incorporated throughout construction.
<b>Air Quality</b>
Apply water to dry soil to prevent dust production. Use water for compaction in the fill areas and as a dust retardant in both the soil cut areas and haul roads.
Comply with MassDEP's idling regulations. Post idling restriction signage on project construction sites.
Follow existing MassDEP's Solid Waste and Air Quality Control regulations and MBTA retrofit procedures for construction equipment to reduce emissions.
<b>Noise</b>
Prepare a Noise Control Plan in conjunction with the contractor's specific equipment and methods of construction.
Use specially quieted equipment with enclosed engines and/or high-performance mufflers.
Perform construction equipment noise certification testing.
Minimize nighttime construction in residential neighborhoods. Nighttime work may occur only with full coordination with the communities and abutting neighborhoods.
Require ambient-adjusting or manually adjusted backup alarms set to 5dBA over background levels.
Keep truck idling to a minimum.
Set acoustic shield requirement for jackhammers, chainsaws, and pavement breakers.
Develop methods for projecting construction noise levels.
Develop methods for responding to community complaints.



Establish a protocol for reporting noise monitoring results, noise reduction measures used, and responses to the community.
Use shields, shrouds, or intake and exhaust mufflers to control construction noise level.
Apply noise deadening materials to chutes or storage bins.
Install temporary noise barriers.
Apply acoustic enclosures.
Implement specialized back-up alarms.
Limit the size of generators and the duration of their use.
Develop truck routes that minimize exposure to noise-sensitive sites.
Develop other detailed engineering noise control measures, as appropriate.
Route construction equipment and vehicles through areas that would cause the least disturbance to nearby receptors where possible.
Fit any air-powered equipment with pneumatic exhaust silencers.
Locate stationary construction equipment as far as possible from noise-sensitive sites.
Construct noise barriers, such as temporary walls or piles or excavated material, between noisy activities and noise-sensitive receivers.
Monitor noise after service starts (with the proposed mitigation in place) to evaluate whether the actual noise levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.
<b>Vibration</b>
Configure truck routes that minimize exposure to vibration sensitive receptors and maintain smooth roadway surfaces.
Minimize nighttime construction in residential neighborhoods. Nighttime work may occur only with full coordination with the communities and abutting neighborhoods.
Use alternative construction methods to minimize the use of impact and vibratory equipment (e.g., pile drivers and compactors).
Monitor vibration after service starts (with the proposed mitigation in place) to evaluate whether the actual vibration levels correspond with the modeled values and take appropriate corrective actions if the actual values are found to be higher than the projections.

<b>Stormwater</b>
Develop and implement a SWPPP in accordance with NPDES and MassDEP standards.
Stabilize any highly erosive soils with erosion control blankets and other stabilization methods, as necessary.
Reinforce slopes using a hydroseed mix with a resin base, native vegetation, or other approved methods.
Use dewatering controls, if necessary.
Install a gravel entrance at construction sites to prevent sediment from being tracked onto roadways and potentially discharged to surface waters.
Maintain construction equipment to prevent oil and fuel leaks and install catch basin protection as needed.
Consult with MassDEP to ensure planning and implementation of demolition and management of contaminated soils is consistent with applicable MassDEP regulations and recommendations.
Follow all protocols to adequately characterize, stockpile and dispose of materials encountered during construction.
<b>Outreach</b>
Establish a project construction office.
Establish a Green Line Extension project Ombudsman position that would field all construction-period comments and complaints, coordinate with the cities, and respond to public concerns.
Establish a Construction Working Group to advise MassDOT and the MBTA.
Establish a project email address and 24-hour phone hotline for public concerns.
Provide frequent website updates of construction activities at <a href="http://www.mass.gov/greenlineextension">www.mass.gov/greenlineextension</a>
Host neighborhood construction kick-off meetings.
Produce quarterly construction updates.

#### IV. FINDING

Therefore, the Massachusetts Department of Transportation and the Massachusetts Bay Transportation Authority, having reviewed the MEPA filings for the Green Line Extension Project, including the mitigation measures summarized in Tables 1 and 2, finds pursuant to M.G.L. C. 30, S. 61 that, with the implementation of these mitigation measures, all practicable and feasible means and measures would have been taken to avoid or minimize potential damage from the Project to the environment.









